

Abstract Submitted
for the DNP15 Meeting of
The American Physical Society

sPHENIX Hadronic Calorimeter Scintillator Studies REUBEN BYRD, Abilene Christian University, SPHENIX COLLABORATION — A new form of matter called the Quark-Gluon Plasma (QGP) was discovered with the Relativistic Heavy Ion Collider (RHIC). PHENIX is an experiment at RHIC that helped with this discovery, but plans are being made to replace it with a new spectrometer with different capabilities. The sPHENIX detector will consist of a superconducting solenoid magnet, hadronic and electromagnetic calorimetry and charged particle tracking. sPHENIX will enable a rich jet physics program that will address fundamental questions about the nature of the QGP. The new detector will provide full azimuthal coverage and ± 1.1 in pseudorapidity. The Hadronic Calorimeter is a major subsystem in this detector. It is made of alternating layers of scintillating tiles and steel plates. In the current prototype the tiles are covered with a reflective coating and contain wavelength shifting fibers. As the second round of prototypes are developed for an upcoming beam test, special care is being taken to provide uniform light collection efficiency across the detector. Studies are being conducted to ensure this by careful alignment of the silicon photomultipliers to the fibers and varying coatings on the tiles. The effects of the coating will be presented along with the current status and ongoing plans.

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Date submitted: 28 Jul 2015

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