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Detector Design for the sPHENIX Hadronic Calorimeter SHAWN BECKMAN, University of Colorado, PHENIX COLLABORATION — The sPHENIX detector proposal, for precision jet measurements in heavy ion collisions at RHIC, requires a large coverage hadronic calorimeter. The design must be compact and incorporate the magnetic field flux return, thus requiring the electronics to operate in a magnetic field. The current design incorporates alternating plates of steel and plastic scintillator, with embedded wavelength shifting fiber optics to transmit photons to silicon photomultipliers (SiPMs). Our goal is to optimize the light collection and ensure uniform light yield in the prototype hadronic calorimeter. We report on tests involving embedding fiber optics, light collection into SiPMs, and uniformity testing of scintillator panels.

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