

Abstract Submitted
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Tungsten Scintillating Fibers Electromagnetic Calorimeters for sPHENIX upgrade¹ SIYANG LI, VERA LOGGINS, MICHAEL PHIPPS, ANNE SICKLES, Univ of Illinois - Urbana — sPHENIX, a planned new detector at RHIC, features electromagnetic and hadronic calorimetry that covers $|\eta| < 1.1$ and $\varphi = 2\pi$. The large acceptance calorimeter design is optimized for the study of jets in heavy ion collisions. The design includes a tungsten fiber EmCal that is made out of a tower array of plastic scintillating fiber embedded inside a mixture of tungsten powder and epoxy. For this calorimeter, silicon photomultipliers will be attached at the end of the module to convert scintillated optical photons into electrical signals. The sPHENIX group at Illinois is currently making samples of these modules to study the production process and achievable density. In addition, we have set up a silicon photomultiplier read out test system which will be used to evaluate the module performance.

¹sPHENIX collaboration and Brookhaven National Laboratory

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