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Testing and Characterization of the Scintillator Tiles for the sPHENIX Hadronic Calorimeter UTTAM ACHARYA, Georgia State University, SPHENIX COLLABORATION — sPHENIX is a new experiment at RHIC that is designed to quantify the properties of quark-gluon plasma created in relativistic heavy ions collisions with measurements of jets and quarkonia. A crucial component of the sPHENIX detector design for jet measurements is the hadronic calorimeter (HCal) which is located outside of the magnet and composed of plastic scintillating tiles sandwiched between tapered, steel plates, and read out with wavelength shifting fibers and Silicon Photomultipliers (SiPM). The HCal includes 7,680 scintillating tiles that are currently being produced at Uniplast plant in Russia. A test station has been built at Georgia State University to test the quality and performance of each of these tiles with cosmic rays. The results of this test will also be used to optimize the performance of the device towers that will be constructed from these tiles by grouping the tiles with similar performance in each tower. This talk is focused on the design of the test station and the current result of the performance characterization studies of the sPHENIX HCal tiles.

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