

Abstract Submitted
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Cosmic Test Stand Development for PHENIX Muon Trigger Upgrade ALEX BURNAP, PHENIX COLLABORATION — The PHENIX experiment at the Relativistic Heavy Ion Collider at Brookhaven National Laboratory will measure the flavor dependent quark and anti-quark polarizations in the proton. In proton-proton collisions a quark and anti-quark interaction can be signaled by the formation of a W-Boson. At PHENIX, W- Bosons are detected through the presence of a high transverse momentum muon. The current level 1 trigger for single muons makes only a minimum energy cut of about 2 GeV and this results in data rates that far exceed the bandwidth capabilities of the data acquisition system. To rectify this, an upgrade to the current muon trigger is underway that will trigger only on high transverse momentum muons using new resistive plate counters (RPC). Before these RPCs will be installed in the PHENIX spectrometer, their quality will be certified through the use of a cosmic muon test stand. This test stand will consist of a plane of hodoscopes on top and bottom as triggers with 10 RPCs in between. The efficiency and spatial resolution of these RPCs will be measured. This poster will illustrate this testing process.

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