

Abstract Submitted
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The PHENIX MuTrig Local Level One Trigger Upgrade at PHENIX JOSHUA PERRY, Iowa State University, PHENIX COLLABORATION — The PHENIX detector at the Relativistic Heavy Ion Collider at Brookhaven National Laboratory has had robust forward muon tracking and identification from the MuTracker and MuID detector systems for many years. The addition of the resistive plate chamber (RPC) detectors in the forward region, as well as the upgrade of the muon tracker (MuTr) front-end electronics, allows for greater rejection of both collision related and non-collision related backgrounds at the trigger level. The MuTrig Local Level One (LL1) trigger system allows for the rejection of events without high momentum muons originating from the collision; this allows for collision event selection (such as W boson production). The LL1 trigger system was first operated during 2011 data taking, using half of the RPC detector system. For the ongoing 2012 data taking the RPC detector has been expanded, increasing the capabilities of the LL1 trigger system's event selection. The operation and performance of this expanded trigger system will be presented.

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