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Resistive Plate Chamber half-octant production for the PHENIX Forward Trigger Upgrade PHILLIP ABERNETHY, Abilene Christian University, PHENIX COLLABORATION — PHENIX studies polarized p+p collisions produced by the Relativistic Heavy Ion Collider (RHIC) at Brookhaven National Laboratory to better understand the spin structure of a proton. PHENIX is upgrading the forward muon trigger by adding new Resistive Plate Chambers (RPC's). The RPC's will provide the ability to trigger on high p_T single muons. RPC Station 3 consists of sixteen half-octants, each with three modules containing gas gaps. Before the half-octants are assembled, each module must be tested for Quality Assurance (QA). After each module is approved they are mounted with Front End Electronics (FEE) boards to amplify and discriminate the signals for output. Once approved, a three module set is installed into a half-octant shell and the cables are routed so as to minimize additional noise. The half-octants are then evaluated and tested for dark current, gas leaks, and noise levels. This poster will describe the process of assembly and Quality Assurance for each half-octant.

Phillip Abernethy
Abilene Christian University

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