Abstract Submitted for the DNP12 Meeting of The American Physical Society

Temperature study on PHENIX Resistive Plate Chamber 1 MATHEW SOLOMON, Abilene Christian University, PHENIX COLLABORA-TION — The PHENIX collaboration is investigating the results of polarized proton + proton collisions generated by the Relativistic Heavy Ion Collider (RHIC) at Brookhaven National Laboratory. Studying these collisions will help gain perspective on the overall spin structure of the proton. PHENIX has developed a trigger upgrade for the muon arms to select single high transverse momentum (p\_T) muons. A major part of this upgrade is the inclusion of 2 stations of Resistive Plate Chambers (RPC) in each arm of PHENIX. The RPCs are constructed with two gas gaps made of Bakelite and coated with linseed oil, which closely follows the CMS design. These materials are known to be sensitive to high temperatures and within PHENIX a station of RPC's are installed between two large magnets, which could cause the temperature environment to elevate. In order to gain a better understanding of the temperature of the gas gaps, we will compare the externally monitored temperature data from Run-12 to the temperatures acquired from a dedicated temperature profile study. Overall this will help the collaboration operate the RPCs in a manner that will improve their performance and extend their lifetime.

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Date submitted: 01 Aug 2012

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