

Abstract Submitted
for the DNP13 Meeting of
The American Physical Society

Long-range pseudo-rapidity correlations in 200 GeV Au+Au collisions with STAR¹ MARTIN CODRINGTON, U. Texas at Austin, STAR COLLABORATION — Two interesting correlation analyses that may be useful in describing the matter created in heavy-ion collisions are γ -hadron correlations and di-hadron long-range pseudorapidity correlations (the “ridge”). γ -hadron correlations are interesting because photons do not strongly interact with partonic matter: They provide a momentum tag for the recoil hadron(s) which may provide a better understanding of the matter produced. Additional measurements of the ridge using π^0 s at high p_T may lead to a better understanding of ridge formation. Previously published STAR data has shown 2-D charged di-hadron correlations, and 1-D π^0 triggered correlations. We will show results of 2-D correlations of likely γ & π^0 triggers with charged hadrons from Au+Au collisions taken during Runs 7, 10, & 11 with the STAR detector; using the Time Projection Chamber (TPC) and the Barrel ElectroMagnetic Calorimeter (BEMC). The TPC is used to measure the trajectory and momentum of charged hadrons and the BEMC is used to calculate the energy of electromagnetic particles. π^0 s were reconstructed from their decay photons in the Barrel Shower-Maximum Detector which sits $\sim 5.6 X_0$ in the BEMC. The combination of the 3 datasets should provide adequate statistics to examine the ridge at high p_T above 10 GeV.

¹Supported in part by the U.S. Dept. of Energy.

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Date submitted: 01 Jul 2013

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