Abstract Submitted
for the DNP17 Meeting of
The American Physical Society

Charge dependent correlations relative to the 4th-harmonic event plane in Au+Au collisions at 27 and 39 GeV at RHIC/STAR ANTONETT NUNEZ-DELPRADO, Univ of Central Florida, STAR COLLABORATION — In the chiral magnetic effect (CME) [1], an electric current is induced in the presence of a strong magnetic field and a chirality imbalance in the medium created in high-energy nuclear collisions. One corresponding observable for the charge separation across the reaction plane (ψ) is the charge dependent two-particle azimuthal correlator, $\gamma = ¡ \cos(\phi_1 + \phi_2 - 2\psi) ¿$. However, the γ contains both the CME signal and the flow background, complicating the interpretation of the data. In this poster, we investigate the background mechanism with a modified correlator, $\gamma^{II} = ¡ \cos(2\phi_1 + 2\phi_2 - 4\psi) ¿$. The γ^{II} only contains the background, and reflects the role played by the collective flow in the original γ correlator. We will present the STAR data of γ^{II} as a function of centrality measured in Au+Au collisions at 27 and 39 GeV. The results will be compared with those obtained by the ALICE experiment at a much higher collision energy, and will also be compared with model calculations. The physics implications will be discussed. [1]D. Kharzeev, Phys. Lett. B 633 (2006) 260.

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Date submitted: 25 Jul 2017 Electronic form version 1.4