Abstract Submitted
for the DNP13 Meeting of
The American Physical Society

Direct photon-Hadron Correlations in Au+Au collisions at $\sqrt{s} =$ 200 GeV Measured with PHENIX HUIJUN GE, Stony Brook University, PHENIX COLLABORATION — High momentum direct photons are produced back-to-back with partons in the initial hard scatterings in heavy ion collisions. Since such photons do not interact strongly with the quark-gluon plasma created in these collisions, their measured momentum will approximately balance that of the opposing parton prior to any medium modification. Therefore, using high-momentum direct photons as triggers and comparing the away-side yields in direct photon-hadron correlations in Au+Au collisions to those in p+p can potentially shed light on how the opposing jet is modified by the medium. This allows us to gain more insight into the parton energy loss mechanisms. We present the current status of direct photon-hadron correlation measurements in Au+Au collisions at $\sqrt{s} = 200$ GeV and discuss the potential for extending such measurements with the inclusion of data taken in 2011 using the PHENIX detector at RHIC.

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Date submitted: 01 Jul 2013 Electronic form version 1.4