

Abstract Submitted  
for the OSS13 Meeting of  
The American Physical Society

**Photon-Hadron Azimuthal Correlation Measurement in 200GeV d+Au Collisions at RHIC** BING XIA, JUSTIN FRANTZ, Ohio University, PHENIX COLLABORATION — Deuteron-gold collisions are essential to measure the cold nuclear effects, as well as help to study the quark gluon plasma when compared with the heavy ion collision results. Direct photons are less affected by the nuclear medium, thus, they are able to identify the momentum of the scattered partons and the away-side jets. Also, because of the prevalence of the Compton scattering in the direct photon events, the away-side jets are predominated by quark jets. We analyze the azimuthal correlation between high pT direct photons and hadrons and look for the modification of the away-side jet portion of this correlation. The current status of this gamma-jet correlation analysis in d+Au collisions is presented in this speak. This includes analysis of the  $x_E$  distribution which is related to the fragmentation function  $D(z)$ . We will also present the status of a new analysis in d+Au of the asymmetry between positive and negative charged hadrons in the away-side quark jets due to the cross-section dominance of up vs down quarks, which can be compared to Au+Au.

Bing Xia  
Ohio University

Date submitted: 01 Mar 2013

Electronic form version 1.4