

Abstract Submitted  
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**Direct photon-hadron correlations measured using the PHENIX detector** MEGAN CONNORS, Stony Brook University, PHENIX COLLABORATION — Two-particle correlations have been used to study the medium created at RHIC. Since photons do not interact with the strongly coupled medium, they should escape with the same momentum that they had when originally produced by the hard scattering. Therefore, by triggering on a high momentum photon and making angular correlations with hadrons in the event, to good approximation, we know the momentum of the jet which produced these associated hadrons. This is important for understanding jet energy loss in the medium. To extract direct photon-hadron correlations from the large meson decay photon background, we use a statistical subtraction method and more recently an isolation-cut method in p+p which shows a large increase in precision. This talk will present the latest direct photon-hadron correlation results from the p+p and Au+Au collisions  $\sqrt{S_{NN}} = 200$  GeV measured at PHENIX. We use the data to study modification of the fragmentation function in Au+Au, as compared to p+p collisions.

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