Study of Jet Fragmentation Using High-$p_T$ Photon Triggered Events in PHENIX

MATTHEW NGUYEN, SUNY Stony Brook, PHENIX COLLABORATION — In high-energy, central Au+Au collisions it is well-known that the $p_T$ distribution of hadrons associated with jet fragmentation is modified with respect to $p+p$ collisions. The $p_T$ distribution of photons produced in hard collisions, however, is not modified. Using the presence of a high-$p_T$ direct photon to identify hard collisions, we have obtained a sample of jets in a manner which is not biased by the mechanism which alters the hadron spectrum. We discuss a method for tagging direct photons in the PHENIX detector. We present distributions of jets properties indirect photon-tagged Au+Au, Cu+Cu, and $p+p$ collisions and their dependence on centrality and reaction plane orientation.