

# Studying Parton Energy Loss Using Meson Production in Large Collision Systems from PHENIX

*Wednesday, February 8, 2017 10:40 AM (20 minutes)*

A better understanding of the energy loss of partons in the quark-gluon plasma formed in the collisions of heavy ions can be gained by varying the collision system. Recent RHIC runs have provided Cu+Au and U+U collisions. Asymmetric Cu+Au collisions provide a system with similar energy density but different path lengths when compared to Au+Au with the same number of nucleon-nucleon collisions. Also, in the most central Cu+Au events the surface bias is reduced in the Cu-going direction. Similarly the non-spherical nuclear U+U collisions can produce different energy density and surface biases compared to Au+Au collisions. In this talk we present the results from  $\pi^0$  and  $\eta$  production in large systems. We discuss comparisons with Au+Au and how those comparisons further our understanding of parton energy loss in a quark-gluon plasma.

## Preferred Track

Jets and High pT Hadrons

## Collaboration

PHENIX

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