



Contribution ID: 566

Type: **Parallel Talk**

## Measurements of charm, bottom, and Drell-Yan via dimuons in $p+p$ and $p+Au$ collisions at $\sqrt{s_{NN}} = 200$ GeV with PHENIX at RHIC

*Wednesday, 16 May 2018 15:40 (20 minutes)*

Dilepton spectra are a classic probe to study ultra-relativistic heavy ion collisions. At RHIC energies, the dimuon continuum is dominated by correlated pairs from charm and bottom semi-leptonic decays and the Drell-Yan process. No Drell-Yan measurement had been made at  $\sqrt{s_{NN}} = 200$  GeV to date. A precise measurement of the Drell-Yan cross-section can provide constraints to PDFs. The dimuon spectra also contain information on heavy flavor angular correlations, which can constrain the relative contributions from different heavy flavor production mechanisms. Studying heavy flavor correlations in  $p+Au$  collisions may provide further insight to understanding cold nuclear matter effects.

In this talk, we report measurements of  $\mu\mu$  pairs from charm, bottom, and Drell-Yan in  $p+p$  and  $p+Au$  collisions at  $\sqrt{s_{NN}} = 200$  GeV. A further shape analysis is applied to the heavy flavor pair correlations to extract the ratios of leading and next-to-leading order contributions.

### Content type

Experiment

### Collaboration

PHENIX

### Centralised submission by Collaboration

Presenter name already specified

**Primary author:** DAVID, Gabor (Brookhaven National Laboratory)

**Presenter:** LEUNG, Yue Hang (Stony Brook University)

**Session Classification:** Open heavy flavour

**Track Classification:** Open heavy flavour