

# 10th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions



Contribution ID: 249

Type: Poster

## Jet and Di-jet Underlying Event in p+Au collisions at $\sqrt{s_{NN}} = 200$ GeV at STAR

*Tuesday, June 2, 2020 7:30 AM (1h 20m)*

Proton-ion collisions have been included in runs at the LHC and RHIC in addition to proton-proton and heavy ion collisions as a means of studying cold nuclear matter (CNM) effects. These asymmetric systems have yielded some unexpected trends, notably in measurements of nuclear modification factors at different centralities. Detectors at forward/backward rapidity have been used as a proxy for centrality or event activity (EA) in p+Au collisions in order to avoid auto-correlations in mid-rapidity measurements. In this poster, we show correlations of backward-rapidity (Au-going) event activity with mid-rapidity underlying event (UE) in p+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV measured with the STAR detector. We present UE measurements and show the trends of UE in relation to EA for high-transverse momentum ( $p_T$ ) jet events vs. di-jet events. Additionally, we will study collision kinematics via observables including jet rapidity ( $\eta$ ) and jet  $p_T$  as a means of investigating the initial hard scattering of partons in these events.

### Collaboration (if applicable)

STAR

### Track

Jets and High Momentum Hadrons

### Contribution type

Poster

**Author:** STAR COLLABORATION

**Presenter:** VERKEST, Veronica (Wayne State University)

**Session Classification:** Poster session

**Track Classification:** Jets and High Momentum Hadrons