Contribution ID: **352**   Type: **Oral**

Di-hadron back-to-back correlations in p+p and p+Au collisions at STAR

Wednesday, 8 February 2017 09:10 (20 minutes)

Our understanding of proton structure and of nuclear interactions at high energy would be advanced significantly with the definitive discovery of the gluon saturation regime. Forward particle production in hadron collisions at RHIC probes gluons at small x where gluon density is high and expected to reach the saturation regime. Until today the golden channel at RHIC to observe strong hints of saturation has been the azimuthal angular correlation between two back-to-back particles produced in p(d)+nucleus collisions. These correlations test the underlying QCD dynamics of the quark-gluon scattering that dominates at forward rapidity. During the 2015 RHIC run, STAR has collected data for di-hadron correlations of neutral pion production at forward pseudo-rapidity (eta=2.6 to 4.0) using its electromagnetic calorimeter in p+p, p+Au and p+Al collisions at √sNN=200GeV. New results from those data will be presented.

Preferred Track

Initial State Physics and Approach to Equilibrium

Collaboration

STAR

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Session Classification: Parallel Session 5.2: Initial State Physics and Approach to Equilibrium (III)

Track Classification: Initial State Physics and Approach to Equilibrium