

# **pA Physics Workshop at MIT**

## **Report of Contributions**

Contribution ID: 4

Type: **not specified**

## **The proton-proton and hadron-nucleus ridge: quantum interference of glue or flow ?**

*Friday 17 May 2013 09:10 (40 minutes)*

**Presenter:** VENUGOPALAN, Raju (Brookhaven National Laboratory)

Contribution ID: 5

Type: **not specified**

# Welcome to MIT

*Friday 17 May 2013 09:00 (10 minutes)*

Contribution ID: 6

Type: **not specified**

## PHOBOS in the LHC Era

*Friday 17 May 2013 09:50 (40 minutes)*

**Presenter:** STEINBERG, Peter Alan (Brookhaven National Laboratory (US))

Contribution ID: 7

Type: **not specified**

## Explore the high-density QCD medium via particle correlations in pPb collisions at CMS

*Friday 17 May 2013 14:00 (40 minutes)*

The observation of a long-range, near-side two-particle correlation ("ridge") in very high multiplicity proton-proton and proton-lead collisions has opened up the opportunity of studying collective phenomena in these small systems. High luminosity pPb data were collected by the CMS experiment at the LHC in early 2013. New results of identified particle spectra, two- and multi-particle correlations in pPb collisions from CMS will be presented over a wide event multiplicity and transverse momentum range. A direct comparison of pp, pPb and PbPb systems will be provided. Physics implications, especially in the context of color glass condensate and hydrodynamics models will also be discussed.

**Presenter:** LI, Wei (MIT)

Contribution ID: 8

Type: **not specified**

## **Azimuthal anisotropies in lead-lead and proton-lead collisions with the ATLAS detector**

*Friday 17 May 2013 14:40 (40 minutes)*

The presentation will give an overview of measurements of azimuthal anisotropies performed by the ATLAS collaboration using Pb+Pb collisions at  $\sqrt{s_{\text{NN}}}=2.76$  TeV and p+Pb collisions at  $\sqrt{s_{\text{NN}}}=5.02$  TeV.

**Presenter:** WOSIEK, Barbara Krystyna (Polish Academy of Sciences (PL))

Contribution ID: 9

Type: **not specified**

## Recent pPb results from ALICE (part I)

*Friday 17 May 2013 15:50 (40 minutes)*

**Presenter:** LOIZIDES, Constantinos (Lawrence Berkeley National Lab. (US))

Contribution ID: **10**

Type: **not specified**

## **d+Au Hadron Correlations at PHENIX**

*Friday 17 May 2013 11:40 (40 minutes)*

**Presenter:** SICKLES, Anne (Brookhaven)

Contribution ID: 11

Type: **not specified**

## **The Revenge of Wit : Will the Biblical Pillars of AA 2003 be left Standing after the pA of 2013?**

*Saturday 18 May 2013 10:50 (40 minutes)*

Looking for the Ag lining in the rubble of p+Pb at LHC and D+Au at RHIC.

**Presenter:** GYULASSY, Miklos (Columbia University)

Contribution ID: 12

Type: **not specified**

## Dihadron correlations, flow, and jets: quo vadis?

*Friday 17 May 2013 12:20 (40 minutes)*

**Presenter:** DUNLOP, James (Brookhaven National Laboratory)

Contribution ID: **13**

Type: **not specified**

## Stopping, of various kinds

*Saturday 18 May 2013 11:30 (40 minutes)*

**Presenter:** COLE, Brian (Columbia University (US))

Contribution ID: 14

Type: **not specified**

## Recent pPb results from ALICE (part II)

*Saturday 18 May 2013 09:40 (40 minutes)*

**Presenter:** HARRIS, John William (Yale University (US))

Contribution ID: 15

Type: **not specified**

## Study of dijet momentum balance and pseudorapidity in pPb collisions

*Saturday 18 May 2013 12:10 (40 minutes)*

Studies of dijet production in pPb collisions at a nucleon-nucleon center-of-mass energy of 5.02 TeV using the CMS detector are presented. Jets are reconstructed with the anti-kT algorithm with  $R=0.3$ , using combined information from tracking and calorimetry. The dijet momentum balance, azimuthal angle correlations and pseudorapidity distributions are studied and compared to results from PYTHIA reference calculations representing pp collisions.

**Presenter:** LEE, Yen-Jie (CERN)

Contribution ID: 16

Type: **not specified**

## **d+Au at PHENIX: Insights on the Cronin Effect, Shadowing and Saturation**

*Saturday 18 May 2013 15:40 (40 minutes)*

**Presenter:** JACAK, Barbara (Stony Brook University)

Contribution ID: 17

Type: **not specified**

## Reminiscences of Wit Busza and 41 Years of p+A Physics

*Friday 17 May 2013 16:30 (40 minutes)*

**Presenter:** TANNENBAUM, Michael (Brookhaven National Laboratory (US))

Contribution ID: 18

Type: **not specified**

## Hadron-Nucleus Interactions: What we have learned.

*Saturday 18 May 2013 09:00 (40 minutes)*

I will describe the early development of ideas and experiments on hadron-nucleus interactions that have led to modern theories of high energy hadronic interactions. These developments proved crucial for basic understanding of ultra-relativistic heavy ion collisions, but perhaps more importantly, radically changed our preconceptions, and led to modern QCD based descriptions of high energy interactions. I will also discuss how recent developments at RHIC and LHC can further test or falsify modern ideas.

**Presenter:** MCLERRAN, Larry (BNL)

Contribution ID: **19**

Type: **not specified**

## **pA Physics – from Fermi Lab Bubble Chamber Data to Future STAR Upgrade at RHIC**

*Saturday 18 May 2013 14:30 (40 minutes)*

**Presenter:** HUANG, huan (UCLA)

Contribution ID: 20

Type: **not specified**

## High Multiplicity pp and pA Collisions: Hydrodynamics at its Edge and Explosive Stringy Pomeron

*Friday 17 May 2013 11:00 (40 minutes)*

High Multiplicity pp and pA Collisions are a place where the macroscopic description (thermodynamics and hydrodynamics) meets with the microscopic one (pomeron and QCD strings). First I discuss what happens with the hydrodynamical predictions as the system size gets smaller and smaller. For simplicity, we don't do it numerically, but analytically using Gubser's flow. We found that the radial flow is expected to increase, while the elliptic flow decreases, and higher harmonics stronger suppressed. Then we approach the problem from the opposite side, using a string-based Pomeron model. We found that as the intrinsic temperature of the string grows, it approaches the Hagedorn regime and produces a high entropy string ball, amusingly dual to a certain black hole. Furthermore, when the string temperature narrows on the Hagedorn temperature or  $T/T_H - 1 = \mathcal{O}(1/N_c)$ , the stringy ball becomes a sQGP ball with non-negligible pressure and hydrodynamical flow.

**Presenter:** SHURYAK, Edward (stony brook university)

Contribution ID: **21**

Type: **not specified**

**TBD**

**Presenter:** KOCH, Volker (LBNL)

Contribution ID: 22

Type: **not specified**

## Elementary pseudoscalars, scalars and pA (AA) collisions.

*Saturday 18 May 2013 13:50 (40 minutes)*

**Presenter:** KRASNY, Witold (Univ. P. et Marie Curie (Paris VI) (FR))

Contribution ID: 23

Type: **not specified**

## Let's All Be Wit-ty: Learning from p(d)+A Collisions

*Saturday 18 May 2013 16:20 (40 minutes)*

**Presenter:** MUELLER, Berndt (Duke University)

Contribution ID: 24

Type: **not specified**

## Coffee Break