

Curriculum Vitae

Education

Columbia University, New York, NY

Ph.D. Physics (2012)

Area of Study: Experimental Nuclear Physics, Relativistic Heavy Ion Collisions

Thesis: *Jet Quenching in Relativistic Heavy Ion Collisions at the LHC*

Adviser: Dr. Brian Cole

M.Phil. (2009), **M.A.** (2008), **B.S.** (2006 *Magna cum Laude*)

Research Interests

I am interested in the properties of Quantum Chromodynamics at finite densities and temperatures, specifically in a medium of deconfined quarks and gluons known as the Quark Gluon Plasma produced in nucleus-nucleus collisions. Highly energetic particles are produced from scatterings with large transverse momentum transfer serve as an external probe of the hot and evanescent matter through the phenomenon of jet quenching. My research has focused on experimental measurements sensitive to this phenomenon using fully reconstructed jets in Pb + Pb collisions with the ATLAS detector at the LHC.

Academic Experience

2012–present **Postdoctoral Research Scientist**, Columbia University, Nuclear Group

2006–2012 **Graduate Research Assistant**, Columbia University, Nuclear Group

Honors and Awards

2013 **ATLAS Thesis Award**

2013 **Springer Thesis Award**

Selected Publications

ATLAS Collaboration, *Observation of Associated Near-side and Away-side Long-range Correlations in $\sqrt{s_{NN}} = 5.02$ TeV Proton-lead Collisions with the ATLAS Detector*, arXiv:1212.5198 [hep-ex].

ATLAS Collaboration, *Measurement of Z boson Production in Pb + Pb Collisions at $\sqrt{s_{NN}} = 2.76$ TeV with the ATLAS Detector*, Phys. Rev. Lett. **110** (2013) 022301, arXiv:1210.6486 [hep-ex].

ATLAS Collaboration, *Measurement of the jet radius and transverse momentum dependence of inclusive jet suppression in lead-lead collisions at $\sqrt{s_{NN}} = 2.76$ TeV with the ATLAS detector*, Phys. Lett. **B719** (2013) 220–241, arXiv:1208.1967 [hep-ex].

ATLAS Collaboration, *Measurement of the azimuthal anisotropy for charged particle production in $\sqrt{s_{NN}} = 2.76$ TeV lead-lead collisions with the ATLAS detector*, Phys. Rev. **C86** (2012) 014907, arXiv:1203.3087 [hep-ex].

ATLAS Collaboration, *Measurement of the centrality dependence of the charged particle pseudorapidity distribution in lead-lead collisions at $\sqrt{s_{NN}} = 2.76$ TeV with the ATLAS detector*, Phys. Lett. **B710** (2012) 363–382, arXiv:1108.6027 [hep-ex].

ATLAS Collaboration, *Measurement of the pseudorapidity and transverse momentum dependence of the elliptic flow of charged particles in lead-lead collisions at $\sqrt{s_{NN}} = 2.76$ TeV with the ATLAS detector*, Phys. Lett. **B707** (2012) 330–348, arXiv:1108.6018 [hep-ex].

ATLAS Collaboration, *Measurement of the centrality dependence of J/ψ yields and observation of Z production in lead-lead collisions with the ATLAS detector at the LHC*, Phys. Lett. **B697** (2011) 294–312, arXiv:1012.5419 [hep-ex].

ATLAS Collaboration, *Observation of a Centrality-Dependent Dijet Asymmetry in Lead-Lead Collisions at $\sqrt{s_{NN}} = 2.76$ TeV with the ATLAS Detector at the LHC*, Phys. Rev. Lett. **105** (2010) 252303, arXiv:1011.6182 [hep-ex].

Invited Talks

Measurements of Hard Probes in Heavy Ion Collisions with ATLAS, 29th Winter Workshop on Nuclear Dynamics, Squaw Valley, CA, February, 2013.

Measurements of Jets and Jet Properties with the ATLAS Detector, parallel session talk at The 2012 Fall Meeting of the APS Division of Nuclear Physics, Newport Beach, CA, October, 2012.

Measurements of Jet Suppression with ATLAS, parallel session talk at The XXIII International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions, Washington D.C., Aug, 2012.

Jet Quenching and Heavy Flavor Production with the ATLAS detector, plenary session talk at The 5th International Conference on Hard and Electromagnetic Probes of High Energy Nuclear Collisions, Cagliari, Italy, May, 2012.

ATLAS Measurements of Jets in Heavy-Ion Collisions, parallel session talk at The 19th Particles and Nuclei International Conference Cambridge, MA, July 2011.

Measurements of Jets and Jet Quenching in $\sqrt{s_{NN}} = 2.76$ TeV Pb + Pb Collisions with the ATLAS detector at the LHC, parallel session talk at The XXII International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions, Annecy, France, May, 2011.

Heavy-ion Physics with the ATLAS Detector, INTWorkshop 10-2a: Quantifying the Properties of Hot QCD Matter, Seattle, WA, April 2010

ATLAS Jet Reconstruction Capabilities in Heavy-ion Collisions, parallel session talk at The 2008 Fall Meeting of the APS Division of Nuclear Physics, Oakland, CA, October 2008.

Seminars

Results on Jet Quenching from ATLAS, seminar at Columbia University, New York, NY, April 2013.

Jet Quenching at the LHC: Results from the ATLAS Experiment, seminar at Brookhaven National Laboratory, Upton, NY, March 2013.