Corey Adams

Graduate Student, Yale University

Curriculum Vitae

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Education

Yale University **New Haven, CT**

- M.S. Physics — Anticipated, December 2014
- M.Phil. Physics — Anticipated, December 2014
- Ph.D. Physics — Projected, 2016

University of Rochester **Rochester, NY**

- B.S. Physics, *Highest Honors* — May 2011
- B.S. Math, *High Honors* — May 2011

Academic Awards

- Bausch and Lomb Scholarship for Excellence in Science (University of Rochester)
- Excellence in Undergraduate Teaching Award (University of Rochester)

Memberships and Activities

- Member, Sigma Pi Sigma, the undergraduate physics honors society.
- President (2009/10), Treasurer (2008/09), and Member of the Society of Physics Students (University of Rochester)
- Member, Society of Undergraduate Math Students (University of Rochester)

Selected Teaching Experience

Yale University, Department of Physics **New Haven, CT**
Teaching Assistant *Sep 11 - Present*

- **Science and Public Policy**: This course taught students about the dynamic role of science in public policy, and students learned how to distill and present relevant scientific research to policy makers. I led students in discussion sections to improve their writing, critical thinking, and presentation of scientific findings. I also wrote assignments and rubrics, and reviewed, graded and provided feedback for policy papers written by students.
- **Research Methods in Astrophysics:** A course that introduces undergraduates to the basic methods of data collection and analysis in astronomy. I taught students about observation astronomy methods as well as supervised a field trip to the Arecibo telescope, where students learned about the operation and management of telescopes.

University of Rochester, Department of Physics **Rochester, NY**
Physics Tutor *Sep 08 - May 11*

- Three years volunteer tutoring experience for students in introductory classes. Coordinated daily tutoring between students, professors, and graduate students to enhance availability and effectiveness of tutors.

Teaching Assitant *Sep 09 - May 11*

- Designed and helped teach a sequence of workshops on quantum mechanics at the most advanced undergraduate level.

Science Outreach and Education

- **Yale Physics Olympics Judge**: 4 years judging and one year as an event head. Designed an event where students were tasked to build and calibrate a small, gravity based launcher to make a golf ball hit a target reliably and accurately over several distances.
- **New Haven Science Fair Judge**: Reviewed and judged middle school science projects, while discussing the results and methods with the students.
- **Tour Guide for the MicroBooNE collaboration**: Led public tours of the MicroBooNE experiment at Fermilab for audiences ranging from high school students to TEDx local community and business leaders. Described the purpose of the experiment as well as the construction and functioning of the detector.
- **Public Talk on Dark Matter through Yale Science Diplomats**: Part of a public lecture series to teach non scientists about scientific areas that they have heard about in the news. This talk explained the astronomical evidence for dark matter and the prospects for direct detection.

Mentored Students

- Ellen Klein, Yale Undergraduate now at Harvard University
- Mina Himwich, Yale Undergraduate
- Peter Zhang, Yale Undergraduate
- Davio Cianci, University of Chicago undergraduate

Public Talks

NuINT (Workshop on Neutrino Nucleus Interactions), 2014 **Surrey, UK**

- *"Effect of Neutrino interaction systematics for future sterile neutrino searches"* May 2014

Weak Interactions Discussion Seminar, Yale **New Haven, CT**

- *"Probing Neutrino Anomalies at Fermilab's Booster Neutrino Beam"* April 2014

Short Baseline Neutrino Program Meeting, Fermilab **Batavia, IL**

- *"Short Baseline Neutrino Program: Beam Backgrounds and Uncertainties"* Nov 2014

Selected Proposals and Publications

- *"LAr1-ND: Testing Neutrino Anomalies with Multiple LArTPC Detectors at Fermilab,"* LAr1-ND Collaboration, submitted to Fermilab PAC Dec 2013
- *"Short Baseline Neutrino Program Status Report and Update,"* SBN Collaboration, submitted to Fermilab PAC July 2014
- *"The detection of back-to-back proton pairs in Charged-Current neutrino interactions with the ArgoNeuT detector in the NuMI low energy beam line"* ArgoNeuT Collaboration, Phys.Rev. D90, 012008 (2014)
- *"First Measurement of Neutrino and Antineutrino Coherent Charged Pion Production on Argon"* ArgoNeuT Collaboration, submitted to PRL
- *"Measurements of Inclusive Muon Neutrino and Antineutrino Charged Current Differential Cross Sections on Argon in the NuMI Antineutrino Beam"* ArgoNeuT Collaboration, Phys.Rev. D 89, 112003 (2014)
- *"Sterile Neutrino Oscillation Searches with Multiple Detectors Along the Booster Neutrino Beam"*, C. Adams and J. Zennamo, Technical Note for MicroBooNE and LAr1-ND
- *"Neutrino Flux Uncertainties in Oscillation Searches for Different Detector Locations Along the Booster Neutrino Beam"*, C. Adams, Z. Pavlovic, D. Schmitz, J. Zennamo, Technical Note for MicroBooNE and LAr1-ND