

Jason Bane

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EDUCATION

Ph.D, Nuclear Physics

University of Tennessee, Knoxville , TN

Planned December 2019

Dissertation: "The EMC Effect in the $A = 3$ Mirror Nuclei"

Advisor: Professor Nadia Fomin

GPA 3.66

Secondary Education Certification, Math and Science

University of Tennessee, Knoxville , TN

May 2010

GPA 4.0

Bachelor of Science, Physics, Minor in Education

University of Tennessee, Knoxville , TN

May 2009

GPA 3.10

PROFESSIONAL EXPERIENCE

U. of Tennessee, Department of Physics and Astronomy, Knoxville, TN,

Graduate Research Assistant

May 2014 – On going

- Designed and constructed front end electronics for an electron spectrometer.
- Maintained and refurbished individual detector components of a spectrometer.
- Calibrated detectors and used online analysis to control quality of data during an experiment.
- Performed analysis on a large set of data involving multiple nuclear targets.
- Instructed new researches on the use of hardware and software used in the field

Graduate Teaching Assistance

August 2012 – May 2015

- Designed and implemented observational and planetarium based astronomy labs.
- Instructed students in laboratory exercises to help conceptualize physics topics.
- Tutored students for home work assistance and test prep.

Clay County Tennessee Education Department, Celina, TN

Secondary Educator

August 2010 – May 2012

- Created lesson plans that included interactive, creative thinking, and discussion driver curriculum for a diverse body of geometry students.

- Constructed lessons that used hands on lab activities, demonstrations, and interactive computer lessons to instruct high school Juniors and Seniors in algebra based physics.
- Used discussion based problem solving lessons to help remedial math students to improve their algebra, geometry and trigonometry skills for post secondary education.
- Math and reading focused tutoring.

TECHNICAL SKILLS

Program Languages: c++, python, cern-ROOT, latex, and fortran

Software: Microsoft office, Libre Office, Texstudio, vim, atom

OS: Linux(Red Hat), Windows, MacOS

PUBLICATIONS

- H. Dai, [et al. including **J. Bane**], “First Measurement of the Ar(e,e')X Cross Section at Jefferson Lab,” Phys. Rev. C 99, 054608 May 2019
- R. Cruz-Torres, [et al. including **J. Bane**], “Comparing proton momentum distributions in A=3 nuclei via ^3He and $^3\text{H}(e,e'p)$ measurements,” in preparation, (2019)
- S. N. Santiesteban, S. Alsalmi, D. Meekins, **J. Bane**, et al., “Density Changes in Low Pressure Gas Targets for Electron Scattering Experiments” in preparation (2018)
- H. Dai, [et al. including **J. Bane**], “First Measurement of the Ti(e,e')X Cross Section at Jefferson Lab,” Phys. Rev. C 98, 014617 July 2018
- P V. Pandey, [et al. including **J. Bane**], “Probing electron-argon scattering for liquid-argon based neutrino-oscillation program,” preprint arXiv:1711.01671

Honors

Jefferson science associates graduate fellowship award (2018)

Chancellors honors for extraordinary professional promise (2016)

DOE office of science graduate student research program award (2015)

Dean's List 2009 Academic Year (2010)

Conference Presentations

- “EMC in A=3 from MARATHON,” 2nd Workshop on Quantitative Challenges in SRC and EMC Research, MIT, Cambridge MA, March 2019
- “Ratios in A=3 nuclei from MARATHON,” American Physical Society's Division of Nuclear Physics' yearly meeting, HA, October 2018
- “Measurement of the spectral function of Argon and Titanium through the(e,e'p) reaction,” American Physical Society's Division of Nuclear Physics' yearly meeting, HA, October 2018
- “Status of the MARATHON experiment.” American Physical Society's Division of Nuclear Physics' yearly meeting, PA, October 2017

Poster Presentations

- "The impetus in the EMC effect, a EMC simulation." Gordon Research Conferences, Holderness, NH. August 2018
- "Searching for the Origin of the EMC effect." SURA Board of Trustees Meeting, Newport News, VA. April 2018

REFERENCES

Nadia Fomin, Professor
Department of Physics and Astronomy
University of Tennessee at Knoxville
(865) 974-1509, fomin@vols.utk.edu

Douglas Higinbotham, Staff Scientist
Jefferson Lab Accelerator Facility
(757) 584-7851, doug@jlab.edu

INTERESTS

Football, coaching, programing, boating, traveling,