

Michael Crumrine
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EDUCATION

Ph.D. Physics: Experimental Cosmology - In Progress

University of Minnesota, Minneapolis, MN

- Thesis adviser: Dr. Clem Pryke

B.Sc Physics and Mathematics - May 2013

Beloit College, Beloit, WI

- Degree awarded Magna Cum Laude
- Departmental Honors in Physics
- Chapin presidential scholarship
- James R. Ferwerda endowed science scholarship
- Thompson Observatory prize in astronomy and astrophysics

RESEARCH EXPERIENCE

Graduate Student at University of Minnesota with the Bicep/Keck program measuring the polarization of the cosmic microwave background in search of evidence for cosmic Inflation.

- Designed cryostats for upcoming Bicep Array experiment
- Deployed to South Pole Nov. 2016 - Jan 2017

SULI Intern at Lawrence Berkeley National Lab developing a new CBED / STEM hybrid imaging mode for the TEAM I transmission electron microscope. (2013)

Instrument Construction and Alteration with Dr. Patrick Polley. Constructing and implementing portable power supplies for Hall probe magnetometers and altering the instruments for increased sensitivity. (2012)

REU at University of South Florida studying exchange bias in magnetic trilayers and the role of the antiferromagnet bulk structure (2012)

- Research presented at the Midstates Undergraduate Research Symposium and at the 2013 March meeting of the American Physical Society in Baltimore as one of the undergraduate presentations

Accelerator Repair with Dr. Paul Stanley, working on repairing and reconstructing the dehumidification and refrigeration system (2010)

TEACHING EXPERIENCE

Graduate Teaching Assistant:

- PHYS 1301: Introductory Physics for Science and Engineering
 - Aug. 2014 - Dec. 2014
 - Aug. 2015 - May 2016
- PHYS 1201: Introductory Physics for Biology and Pre-Medicine
 - Jan. 2015 - May 2015
 - May 2016 - Aug. 2016

Freelance Tutor

- Differential Equations - University of California, Berkeley: Sept. 2013 - Nov. 2013
- First Semester Physics - University of California, Berkeley: Feb. 2014 - May 2014
- First Semester Physics - University of Minnesota, Twin Cities: May 2014 - Aug. 2014

OTHER EMPLOYMENT

Fermilab Seasonal Employee assisting in the decommissioning of the Collider Detector at Fermilab (CDF)

Scenic Shop Supervisor in a wood shop for the Beloit College theatre department (2010 - spring 2013)

Scenic Shop Employee in a wood shop for the Beloit College theatre department (2009-2010)

PROGRAMMING EXPERIENCE

Matlab, Octave, Java, IDL, Mathematica, C++, Origin, L^AT_EX, Python, Solidworks, COMSOL

PROFESSIONAL AFFILIATIONS

Phi Kappa Psi Fraternity

Mortar Board Senior Honor Society

Society of Physics Students

American Physical Society

Mathematical Association of America