Benjamin M. Rose

Physics Ph.D. Candidate at Notre Dame

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Education

Master of Science in Physics — **2016**
University of Notre Dame, Notre Dame, Indiana
Advisor: Professor Peter Garnavich

Bachelor of Science in Physics, *cum laude* — **2012**
Whitworth University, Spokane, Washington
Minor: Mathematics

Observational Experience

Vatican Advanced Technology Telescope (VATT) — **June 2014**
Mount Graham International Observatory, Safford, Arizona
4 nights

Professional Societies

American Astronomical Society (AAS), Junior Member — **2014 - present**
American Physical Society (APS), Student Member — **2011 - 2014**

Activities & Outreach

Graduate Physics Society (GPS) Annual Conference — **2016**
Organizing committee member for a conference with over 60 attendees.

Graduate Physics Society — **2015 - present**
Executive Board Member promoting the Socieity's goal of "fostering a community built on intellectual, professional, and social interactions."

Graduate Student Union (GSU) — **2013 - 2014**
I was the Physics Department representative and worked on issues of parking, health insurance, building remodels, and more.

Notre Dame Summer Band — **2013 & 2014**

Whitworth University Wind Symphony — **2009 - 2012**

Whitworth Near Space — **Spring 2012**
I worked with middle school students on two high altitude balloon experiments, where we developed and built radiation, ozone, and temperature detector systems.

Club Treasurer, Whitworth University — **2009 - 2011**

Awards

GSU Conference Presentation Grant, Notre Dame — **2015 & 2016**

Notebaert Professional Development Award, Notre Dame — **2015 & 2016**

Poster Grant, GSU 6th Annual Research Symposium — **2014**

Presidential Scholarship, Whitworth University — **2008 - 2012**

Delbert E. Friesen Memorial Scholarship, Whitworth University — **2011 - 2012**

Talent Scholarship in Physics, Whitworth University — **2008 - 2011**

Talent Scholarship in Music, Whitworth University — **2009 - 2012**

Laureate Society, Whitworth University — **4 semesters**
For a semester GPA of 3.75 or greater

Computer Skills

Daily Use: Python, git, GitHub, Astropy, LaTeX, Markdown, macOS
Proficient: Jupyter Notebook, pandas, Linux, Jekyll, HTML, CSS, Windows
Basic Knowledge: C++, Parallel Computing, Mathematica, MATLAB, Javascript

Teaching Experience

Individual Tutoring **Fall 2015 & 2016**
Sessions included topics in math methods, thermodynamics, and E & M.

Intro. to Scientific Computing with Python **Spring 2016**
Taught basic programing help session and graded assignments.

Engineering Intro. Physics labs **Spring & Fall 2013**

Pre-Med. Intro. Physics labs **Fall 2012 & Summer 2013**

Oral Presentations

Searching For a Cosmic-scale Dark Flow **November 20, 2015**
2015 APS Prairie Section Meeting, Notre Dame

Finding A Cosmic Bulk Flow **April 28, 2014**
2014 GPS Spring Conference, Notre Dame

Determining the Location of a Radioactive Source in Majorana Demonstrator **August 2, 2011**
REU Culminating Talks, Duke University

Poster Presentations

Correlations Between Hubble Residuals and Local Stellar Populations of Type Ia Supernovae **January 7, 2017**
AAS 229th Meeting, Grapevine, Texas

Correlating Type Ia Supernova Properties With Their Local Environment Using HST Snapshots of Host Galaxies **January 6, 2016**
AAS 227th Meeting, Kissimmee, Florida

Prospects for Detecting a Cosmic Bulk Flow **January 6, 2015**
AAS 225th Meeting, Seattle, Washington

Finding A Cosmic Bulk Flow **February 27, 2014**
GSU 6th Annual Research Symposium, Notre Dame

Determining the Location of a Radioactive Source in Majorana Demonstrator **October 27, 2011**
APS, Division of Nuclear Physics, Michigan State University

Publications

[4] *Detectability of Cosmic Dark Flow in the Type Ia Supernova Redshift-Distance Relation* Mathews, G.J., **Rose, B. M.**, Garnavich, P., et al. 2016 ApJ 827 60

[3] *The New Eclipsing CV MASTER OTJ192328.22+612413.5: A Possible SW Sextantis Star* Kennedy, M. R., Callanan, P., Garnavich, P. M., **et al.** 2016, AJ, 152, 27

[2] *Constraints on the Birth of the Universe and Origin of Cosmic Dark Flow* Mathews, G. J., Gangopadhyay, M. R., Garnavich, P., **Rose, B. M.**, et al. 2015 Int. J. Mod. Phys. A, 30, 1545022

[1] *High-Amplitude, Rapid Photometric Variation of the New Polar MASTER OT J1321* Littlefield, C., Garnavich, P., Magno, K., **et al.** 2015, Information Bulletin on Variable Stars, 6129, 1