Benjamin Rose

Physics PhD Candidate at Notre Dame
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Education

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

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

Observational Experience

Vatican Advanced Technology Telescope (VATT)
Mount Graham International Observatory
June 27, 2014 - July 1, 2014

Activities & Outreach

Graduate Physics Society (GPS) Annual Conference, Organizing Committee Member — **2016**
Graduate Physics Society, Executive Board Member — **2015 - present**
American Astronomical Society (AAS), Junior Member — **2014 - present**
Graduate Student Union (GSU), Physics Department Representative — **2013 - 2014**
American Physical Society (APS), Student Member — **2011 - 2014**
Notre Dame Summer Band — **2013 & 2014**
Whitworth University Wind Symphony — **2009 - 2012**
Whitworth Near Space — **Spring 2012**
Worked with middle school students on high altitude balloon experiments
Developed & 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, pandas, Linux, Jekyll, HTML, CSS
Basic Knowledge: Windows, C++, ROOT, Mathematica, MATLAB, Javascript
Some Experience: LabVIEW, Apple Script, Julia, Parallel Computing, Swift

Teaching Experience

Individual Tutoring — **Fall 2015 & 2016**
Including math methods, thermodynamics, and E & M

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

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
2015 APS Prairie Section Meeting, Notre Dame — **November 20, 2015**

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

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

Poster Presentations

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

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

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

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

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

Publications

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

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

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

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