

# Benjamin M. Rose

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Education	<b>Doctor of Philosophy in Physics</b>	expected <b>2018</b>
	<b>Master of Science in Physics</b>	<b>2016</b>
	University of Notre Dame, Notre Dame, Indiana Advisor: Professor Peter Garnavich	
	<b>Bachelor of Science in Physics, <i>cum laude</i></b>	<b>2012</b>
	Whitworth University, Spokane, Washington Minor: Mathematics	
Professional Societies	<b>American Astronomical Society (AAS)</b> , Junior Member	<b>2014 - present</b>
	<b>American Physical Society (APS)</b> , Student Member	<b>2011 - 2014</b>
Activities & Outreach	<b>Graduate Physics Society (GPS)</b>	
	Public Relations Chair	<b>2017 - present</b>
	Member	<b>2012 - present</b>
	Executive Board Member	<b>2015 - 2017</b>
	Annual Conference co-chair, for a conference of over 60 attendees	<b>2016</b>
	<b>Graduate Student Union (GSU)</b>	<b>2013 - 2014</b>
	I was the Physics Department representative and worked on issues regarding parking, health insurance, building remodels, and more	
	<b>Whitworth Near Space</b>	<b>Spring 2012</b>
Awards	Assisted middle school students on two high altitude balloon experiments by assisting in building radiation, ozone and temperature sensors	
	<b>Club Treasurer</b> , Whitworth University	<b>2009 - 2011</b>
	<b>Lennox Graduate Fellowship</b> , Notre Dame	<b>2017</b>
	Recognizes achievements and promise as a graduate student in physics.	
	<b>GSU Conference Presentation Grant</b> , Notre Dame	<b>2015 &amp; 2016</b>
	<b>Notebaert Professional Development Award</b> , Notre Dame	<b>2015 &amp; 2016</b>
	<b>Poster Grant</b> , GSU 6th Annual Research Symposium	<b>2014</b>
	<b>Presidential Scholarship</b> , Whitworth University	<b>2008 - 2012</b>
Computer Skills	<b>Delbert E. Friesen Memorial Scholarship</b> , Whitworth University	<b>2011 - 2012</b>
	<b>Talent Scholarship in Physics</b> , Whitworth University	<b>2008 - 2011</b>
	<b>Daily Use:</b> Python, git, GitHub, Astropy, L <sup>A</sup> T <sub>E</sub> X, Markdown, macOS, numpy, scipy	
	<b>Proficient:</b> Jupyter Notebook, Jekyll, HTML, CSS, Wordpress, TravisCI, pytest, codcov, emcee	
Open Source Contributions	<b>Competent:</b> pandas, Linux, Windows	
	scipy	documentation update of limitation in <code>integrate.quad</code> accepted
	sep	documentation update accepted
	emcee	submitted a documentation update
	astropy	reported an issue in world coordinate system utility

<b>Teaching Experience</b>	<b>Introduction to Scientific Computing with Python</b>	<b>Summer 2017</b>
	Lead instructor covering an introduction to python and computational methods for the Notre Dame REU program	
	<b>Physics GRE Preparation Course</b>	<b>Summer 2017</b>
	Solo instructor for a review course of the material on the Physics GRE exam for the Notre Dame REU program	
	<b>Introduction to Scientific Computing with Python</b>	<b>Spring 2016</b>
	Taught basic programming help session and graded assignments	
	<b>Engineering Introduction Physics Labs</b>	<b>Spring &amp; Fall 2013</b>
<b>Observational Experience</b>	<b>Pre-Medical Introduction Physics Labs</b>	<b>Fall 2012 &amp; Summer 2013</b>
	<b>Supplemental Instruction Leader</b>	<b>Fall 2011 &amp; Spring 2012</b>
	Led a group study session of introductory physics material with a focus on active learning techniques	
<b>Oral Presentations</b>	<b>Ancillary Program PI, SDSS-IV MaNGA</b>	<b>2017</b>
	<i>Exploring a Possible Correlation Between Hubble Residuals and SN Ia Local Environments</i>	
	Awarded 40 ancillary targets	
<b>Poster Presentations</b>	<b>Vatican Advanced Technology Telescope (VATT)</b>	<b>June 2014</b>
	Mount Graham International Observatory, Safford, Arizona	
	4 nights	
<b>Refereed Publications</b>	3 <i>Searching For a Cosmic-scale Dark Flow</i> , November 20, 2015, 2015 APS Prairie Section Meeting, Notre Dame, Indiana	
	2 <i>Finding A Cosmic Bulk Flow</i> , April 28, 2014, 2014 GPS Spring Conference, Notre Dame, Indiana	
	1 <i>Determining the Location of a Radioactive Source in MAJORANA DEMONSTRATOR</i> , August 2, 2011, REU Culminating Talks, Duke University,	
<b>h-index = 2</b>	5 <i>Correlations Between Hubble Residuals and Local Stellar Populations of Type Ia Supernovae</i> , January 7, 2017, AAS 229th Meeting, Grapevine, Texas	
	4 <i>Correlating Type Ia Supernova Properties With Their Local Environment Using HST Snapshots of Host Galaxies</i> , January 6, 2016, AAS 227th Meeting, Kissimmee, Florida	
	3 <i>Prospects for Detecting a Cosmic Bulk Flow</i> , January 6, 2015, AAS 225th Meeting, Seattle, Washington	
	2 <i>Finding A Cosmic Bulk Flow</i> , February 27, 2014, GSU 6th Annual Research Symposium, Notre Dame, Indiana	
	1 <i>Determining the Location of a Radioactive Source in MAJORANA DEMONSTRATOR</i> , October 27, 2011, APS, Division of Nuclear Physics, Michigan State University	
	4 Mathews, G.J., <b>Rose, B. M.</b> , Garnavich, P., et al. 2016, <i>Detectability of Cosmic Dark Flow in the Type Ia Supernova Redshift-Distance Relation</i> , ApJ, 827, 60	
	3 Kennedy, M. R., Callanan, P., Garnavich, P. M., <b>et al.</b> 2016, <i>The New Eclipsing CV MASTER OTJ192328.22+612413.5: A Possible SW Sextantis Star</i> , AJ, 152, 27	
	2 Mathews, G. J., Gangopadhyay, M. R., Garnavich, P., <b>Rose, B. M.</b> , et al. 2015, <i>Constraints on the Birth of the Universe and Origin of Cosmic Dark Flow</i> , International Journal of Modern Physics A, 30, 1545022	
	1 Littlefield, C., Garnavich, P., Magno, K., <b>et al.</b> 2015, <i>High-Amplitude, Rapid Photometric Variation of the New Polar MASTER OT J1321</i> , Information Bulletin on Variable Stars, 6129, 1	