

# Matthew T. Nichols

3506 Grantswood Ct., Louisville, KY 40213

(502) 471-6359

matthew.nichols@louisville.edu

EDUCATION	<b>Master of Science</b> in Physics expected December 2014	University of Louisville, KY
	<b>Bachelor of Science</b> in Physics May 2012 Summa Cum Laude, Honors Scholar Astrophysics concentration; Math and Spanish minors	University of Louisville, KY
RESEARCH EXPERIENCE	<b>Research Assistant</b>	2012-Present
	Working for Dr. Lutz Haberzettl at U. Louisville investigating morphological properties of galaxies within the GOODS-S field, more specifically, following disk growth and formation, as well as star formation in Lyman break galaxies. Work has resulted in AAS posters and will include future publications, culminating with a Ph.D. thesis.	
	<b>Independent research</b>	Summer 2011
	Worked for Dr. Robert Nichol at the Institute of Cosmology and Gravitation in Portsmouth, UK searching for observational evidence of modified gravity using SDSS data. Tested a theory that the lensing and dynamical masses of galaxies were environmentally dependent. Resulted in AAS poster and honors thesis.	
	<b>Research assistant</b>	2010-2011
	Worked for Dr. James Lauroesch at U. Louisville measuring spectral absorption lines of PKS 0528-250 to determine abundances of systems along the line of sight.	
POSTERS	Nichols, M.T., Haberzettl, L., Lenhert, M., Williger, G., Lauroesch, J., Leist, B. (2014, May). <i>Disk Growth in GOODS-S Galaxies at Redshifts <math>0.5 \leq z \leq 3.0</math></i> . Poster presented at the AAS Kentucky Area Meeting.	
	Wojno, J.L., Nichols, M.T., Haberzettl, L., Williger, G., Leist, B. (2014, January). <i>Herschel-detected LBGs at <math>z \sim 2</math></i> . Poster presented at AAS.	
	Nichols, M.T., Wojno, J., Haberzettl, L., Williger, G., Lehnert, M., Nesvadba, N. (2013, June). <i>Dust Properties of Star Forming Galaxies at <math>z \sim 2</math></i> . Poster presented at AAS.	
	Nichols, M.T., Nichol, R., Zhao, G., Crittenden, R., Lauroesch, J.T. (2012, January). <i>The Environmental Dependence of Dynamical and Lensing Mass Differences</i> . Poster presented at AAS.	
SCHOLARSHIPS & AWARDS	<ul style="list-style-type: none"><li>• John A. Dillon Jr. Fellowship, 2013-2014, Physics &amp; Astronomy, U. Louisville</li><li>• Kentucky Educational Excellence Scholarship, 2008-2012, Commonwealth of KY</li><li>• Hallmark Trustee's Scholarship, 2008-2012, U. Louisville</li><li>• Etscorn International Research Award, 2011, Honors Program, U. Louisville</li><li>• Bullitt Astronomy Scholarship, 2009, Dept. of Physics &amp; Astronomy, U. Louisville</li></ul>	
SKILLS & COMPUTER EXPERIENCE	<ul style="list-style-type: none"><li>• Microsoft Windows, Mac, Linux</li><li>• IDL, C, C++, Python, HTML</li><li>• IRAF, GALFIT, SExtractor, GALAPAGOS</li></ul>	

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**EMPLOYMENT** Jewish Community Center, Louisville, KY July 2013  
*Camp Instructor:* Created content for and taught a week-long astronomy summer camp for 5th graders as part of an experimental joint program with U. Louisville.

U. Louisville Fall 2011 to Summer 2013  
*Teaching Assistant:* Prepared, proctored, graded, and reported physics and astronomy labs each week. Graded papers and exams for large lecture classes.

**HONORS & PROFESSIONAL SOCIETIES**

- **Sigma Pi Sigma**, member, 2011-Present
- **American Astronomical Society**, junior member, 2008-Present
- **American Physical Society**, junior member, 2008-2012
- **U. Louisville Honors Scholars Program**, 2009-2012

**ACTIVITIES** **Volunteer mentor** 2012-2014  
Guided high school students in their science fair projects involving astrophysics.

**GRE Preparation Seminar Organizer** 2012-Present  
Organized and ran seminars to help undergraduates prepare for the physics GRE.

**Society of Physics Students** 2008-Present  
Member of both National and local; President of local chapter 2011-2013.

**Volunteer Astronomer** October 2012  
Fielded questions at the *Ask an Astronomer* booth at the National Science Teachers Association meeting.