

MATTHEW THOMAS NICHOLS

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Education

2012-2014, M.S. in Physics, University of Louisville, USA

2008-2012, B.S. in Physics, University of Louisville, USA

Summa Cum Laude, Honors Scholar

Astronomy/Astrophysics concentration; Math and Spanish minors

Scholarships and Awards

2008-2012, Kentucky Educational Excellence Scholarship

2008-2012, U. of Louisville, Hallmark Trustee's Scholarship

2011, U. of Louisville, Etscorn International Summer Research Award

2009, U. of Louisville, Junior Bullitt Scholarship in Astronomy

Research Experience

2012-Present, research assistant for Dr. Lutz Habertzettl, U. of Louisville.

Creating a catalog of Lyman break galaxies from the GOODS-South survey.

January, 2012, 119th Meeting of the American Astronomical Society.

Presented a poster titled *The Environmental Dependence of Dynamical and Lensing Mass Differences*

2011, Independent research with Dr. Robert Nichol, U. of Portsmouth, UK.

Searched for observational evidence of modified gravity using Sloan Digital Sky Survey data. Tested a theory that the lensing and dynamical masses of galaxies were environmentally dependent. Resulted in AAS poster and honors thesis.

2010-2011, Research assistant for Dr. James Lauroesch, U. of Louisville.

Measured spectral absorption lines of PKS 0528-250 to determine chemical abundances of systems along the line of sight.

Skills and Computer Experience

Microsoft Windows, Linux

Classroom experience with C, C++, FORTRAN

Practical experience with HTML, IDL, IRAF, DS9, Source Extractor, Galapagos

Employment

2011-Present, Teaching Assistant, U. of Louisville.

Prepare and proctor physics and astronomy labs each week, grading the assignments and posting the scores online. Grade papers for large lecture classes.

Honors and Professional Societies

2011-Present, Sigma Pi Sigma

2008-Present, American Astronomical Society, junior member

2008-Present, American Physical Society, junior member

2009-2012, U. of Louisville, Honors Scholars Program

Activities

January, 2013-Present, Astronomy Summer Camp

Develop activities to teach astronomy to middle schoolers at a 5 day summer camp

2012-Present, Volunteer Mentor

Guide high school students in their science fair projects involving astrophysics

2012-Present, Volunteer at Rauch Planetarium and Gheens Science Hall

Give part of the "Skies of Louisville" talk held once a month as needed

2012-Present, GRE Preparation Seminars

Organized and ran seminars to help undergraduates prepare for the physics GRE

2008-Present, Society of Physics Students

Member of National and local

2011-Present, President of local chapter

October, 2012, Volunteer for the "Ask an Astronomer" booth

Fielded questions at the National Science Teachers Association meeting

References

Dr. David Brown, U. of Louisville: professor, undergraduate advisor, SPS advisor

Dr. Christopher Davis, U. of Louisville: professor, graduate advisor

Dr. James Lauroesch, U. of Louisville: professor, undergrad thesis advisor

Prof. Robert Nichol, U. of Portsmouth, UK: former research advisor

Dr. Gerard Williger, U. of Louisville: professor, research collaborator