

Briony H. N. Horgan

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EDUCATION

- 2005 – Present **Cornell University**, Ithaca, NY
Ph.D. in Astronomy expected in 2011. Cumulative GPA: 3.89/4.00
Courses in graduate level geology, astronomy, physics, and chemistry
- 2001 – 2005 **Oregon State University**, Corvallis, OR
B.S. in Physics, Summa Cum Laude. Cumulative GPA: 3.92/4.00
Courses in atmospheres, geology, advanced math, and graduate level physics

RESEARCH EXPERIENCE

- May 2006 – Present **Cornell University Department of Astronomy**, Ithaca, NY
Graduate Research Assistant to Prof. James F. Bell, III
- Summer 2004 **Lubin Cosmology Group, University of California**, Santa Barbara, CA
NNIN Undergraduate Research Assistant to Dr. Miikka Kangas
- 2003 – 2005 **Transparent Conductive Oxides Team, Oregon State University**, Corvallis, OR
Undergraduate Research Assistant to Prof. Janet Tate
- Summer 2003 **Laser Interferometer Gravitational-Wave Observatory**, Livingston, LA
Caltech SURF Undergraduate Research Assistant to Dr. Andri Gretarsson

TEACHING EXPERIENCE

- Aug 2005 – May 2006 **Cornell University Department of Astronomy**, Ithaca, NY
Teaching Assistant for Introductory Astronomy Course
Teaching Assistant for Planetary Image Processing (IDL) Course
- Sep 2004 – Jun 2005 **Oregon State University Physics Department**, Corvallis, OR
Teaching Assistant for General and Upper Division Physics Courses
Physics Department Sponsored Tutor, OSU Learning Center
- Sep 2003 – Jun 2005 **Oregon State University Physics Department**, Corvallis, OR
Private Tutor for Physics and Math Courses, All Levels

LEADERSHIP POSITIONS

- 2007 – 2008 **Graduate Women in Physics, Cornell University**, Ithaca, NY
Vice President
- 2006 – 2007 **Graduate and Professional Student Assembly, Cornell University**, Ithaca, NY
Council of Representatives Member for the Department of Astronomy
- 2007 – 2008 *Assembly Member for the Physical Sciences*
- 2006 – 2007 **Astronomy Graduate Network, Cornell University**, Ithaca, NY
Founding Officer and Vice President
- 2007 – 2008 *President*
- 2003 – 2004 **Society of Physics Students, Oregon State University**, Corvallis, OR
President

PRESENTATIONS AND PUBLICATIONS

- Horgan, B.**, J. Bell, E. Noe Dobrea, P. Thomas, E. Cloutis. Martian North Polar Sulfate Deposits: I. Composition and Thermal Properties. *Journal of Geophysics Research*, to be submitted.
- Horgan, B.**, J. Bell, E. Noe Dobrea, P. Thomas, E. Cloutis. Martian North Polar Sulfate Deposits: II. Morphology and Geologic Context. *Journal of Geophysics Research*, to be submitted.
- Horgan, B.**, J. Bell, E. Noe Dobrea, P. Thomas. Remote Sensing Observations and Implications of Martian North Polar Sulfate Deposits. *7th International Mars Conference*, Abstract #3241, Pasadena, CA, 10 July 2007.
- Horgan, B.**, J. Bell, E. Noe Dobrea. A THEMIS, MOC, and OMEGA Survey of Martian North Polar Deposits. *Mars Odyssey Project Science Group and Science Team Meeting*, Kona, HI, 15 Nov 2006.
- Horgan, B.**, J. Bell, E. Noe Dobrea. A Remote Sensing Survey of Martian North Polar Deposits Between 75N and 85N. *38th Annual DPS Meeting*, Abstract #61.0, Pasadena, CA, 11 Oct 2006.
- Kangas, M., M. Ansmann, K. Copley, **B. Horgan**, R. Leonardi, P. Lubin, T. Villela. A 100-GHz High-gain Tilted Corrugated Nonbonded Platelet Antenna. *IEEE: Antennas and Wireless Propagation Letters*, 4, 304 – 307, 2005.
- Kangas, M., M. Ansmann, **B. Horgan**, N. Lemaster, R. Leonardi, A. Levy, P. Lubin, J. Marvil, P. McCreary, T. Villela. A 31 Pixel Flared 100-GHz High-gain Scalar Corrugated Nonbonded Platelet Antenna Array. *IEEE: Antennas and Wireless Propagation Letters*, 4, 245 – 248, 2005.
- Horgan, B.**, M. Kangas, P. Lubin. A 90 GHz Corrugated Compact-packing Focal-plane-layout Platelet Antenna Array. *2004 NNIN National Convocation*, State College, PA, 16 August 2004.
- Horgan, B.**, J. Tate. Investigating Grain Boundaries in $\text{BaCuS}_{(1-x)}\text{Se}_x\text{F}$ Using Impedance Spectroscopy. *Undergraduate senior thesis*, Oregon State University, Corvallis, OR, 6 June 2004.
- Horgan, B.**, A. Gretarsson. Time-Dependence of Test Mass Internal Modes and Correlations with External Influences in the LIGO Livingston, LA Interferometer. *LIGO Team Meeting*, Livingston, LA, 4 September 2003.

EDUCATION AND PUBLIC OUTREACH

- Planetary Lunch Seminar**
- 2006 – 2007 *Co-Chair*
2007 – 2008 *Chair*
- Center for Radiophysics and Space Research E/PO Program**
- 2007 – 2008 *Volunteer*
- Expanding Your Horizons Youth Conference**
- 2005 – 2007 *Volunteer*
2007 – 2008 *Initial Contacts Co-Chair*
- Focus for Teens Youth Conference**
- 2007 – 2008 *Volunteer*
- John Hopkins Center for Talented Youth Conference**
- 2007 – 2008 *Workshop Leader*

COMPUTING AND LABORATORY SKILLS

- Designing, building, and testing analog and digital circuits as well as optical components
- Extensive experience with computer hardware, as well as machine shop tools and procedures
- *Programming languages:* IDL, Java, C++, VB, LISP
- *Software:* ArcGIS, ERMapper, Photoshop, Mathematica, Maple, AutoCAD, Windows, OS X, Unix

AWARDS, HONORS, AND PROFESSIONAL AFFILIATIONS

- Physics Undergraduate Scholar Award 2004-2005
- Zonta Service Foundation Scholarship 2003-2004
- Excellence in Science Scholarship 2002-2003
- Krane Scholarship in Physics 2002-2003
- Diversity of Achievement Scholarship 2001-2005
- Oregon University System PASS Scholarship 2001-2005
- Honor roll 2001-2005
- American Astronomical Society: Division of Planetary Science, Affiliate Member
- American Geophysical Union, Student Member
- Geological Society of America, Student Member
- The Planetary Society, Member