

Phillip H. Phipps

Curriculum Vitae

Department of Astronomy, Boston University
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Boston, MA 02215

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Education

Ph.D. program	2013 - present
Ph.D. candidate (Sept 30 2016 –present)	Department of Astronomy, Boston University
M.A. Astronomy	September 2015
	Department of Astronomy, Boston University
B.S. Physics with Honors	Spring 2013
B.S. Applied Mathematics with Honors	North Carolina State University

Research Experience

Graduate Researcher	Summer 2015 – present
Advisor: Prof. Paul Withers	
Department of Astronomy, Boston University, Boston, MA	
Research on the Io Plasma Torus around Jupiter.	
Graduate Researcher	Summer 2014 – May 2015
Advisor: Prof. John T. Clarke	
Department of Astronomy, Boston University, Boston, MA	
Image analysis of Jupiter and Saturn aurora.	
Undergraduate Researcher	Fall 2010 – Spring 2013
Advisor: Prof. John M. Blondin	
Department of Physics, NC State University, Raleigh, NC	
Parallelized Astrophysics hydrodynamic FORTRAN simulations of white dwarf accretion disks	

Teaching Experience

Teaching Fellow, AS202	Fall 2015
Department of Astronomy	
Boston University, Boston, MA	
Teaching Fellow, AS203	Spring 2015
Department of Astronomy	
Boston University, Boston, MA	
Teaching Fellow, AS202	Fall 2014
Department of Astronomy	
Boston University, Boston, MA	

Teaching Fellow, AS109
 Department of Astronomy
 Boston University, Boston, MA
 Spring 2014

Teaching Fellow, AS105
 Department of Astronomy
 Boston University, Boston, MA
 Fall 2013

Physics Tutor
 Department of Physics
 NC State University, Raleigh, NC
 Tutored undergraduate physics for engineers and non-majors
 Spring 2012 – Spring 2013

Outreach

Boston University Open Nights
 Helped run BU public open nights
 Spring 2015 – Present

Science by the pint
 Event put on by Harvard Universities Science in the news to discuss science with the general public over a pint.
<http://sitn.hms.harvard.edu/science-by-the-pint/>
 January 2016

Open night for Metropolitan College group
 Managed an open night for the Boston University honor society of metropolitan college.
 December 2015

Lunar eclipse viewing
 Managed a BU public event for the viewing of the Lunar eclipse at Boston University's Coit Observatory.
 September 2015

Observational Experience

Lowell Observatory, Happy Jack, Arizona, Discovery Channel Telescope, 4.3m Telescope
Judson B. Coit Observatory, Boston University, Boston, MA, 14", 10", 8" reflectors and 6" refractor

Computer Experience

Languages: Python, MatLab, IDL, Fortran
Research tools: NAIF/SPICE, DS9, MaximDL
Document Preparation: LaTeX, Windows Office
Operating Systems: Linux, Windows, Mac

Memberships

American Geophysical Union, Student Member
 2016-present

American Astronomical Society, Junior Member
 2010-present

Society of Physics Students
 2009-2015

Awards/Grants

Magnetospheres of Outer Planets (MOP) Travel Grant (\$1500)
 For Travel to MOP 2017 meeting in Uppsala, Sweden
 April 2017

JPL Summer 2017 Internship, June 26th - Sept 2nd (\$8000)
 March 2017

Astronomy Department Teaching Award (\$250)

April 2016

Massachusetts Space Grant Consortium Grant (\$1800)

January 2016

AAS International Travel Grant (\$983)

April 2015

For travel to IAU meeting in Honolulu, Hawaii, August 2015

Abstracts

Phipps, P.H., Withers, P., Buccino, D. R., Yang, Y-M., Hinton, P. C., & Bagenal, F. (2018), Variability in the Io Plasma Torus as Seen by Juno Radio Occultations, Abstract 438966 presented at 2018 Fall Meeting, AGU, Washington, DC, 10-14 Dec.

Phipps, P.H., Withers, P., Buccino, D. R., Yang, Y-M., Hinton, P. C., & Bagenal, F. (2018), Io plasma torus geometry from *Juno* radio occultations, Magnetospheres of Outer Planets conference, Boulder, CO, 9-13 Jul

Phipps, P. H., Withers, P., Buccino, D. R., Yang, Y-M., & Hinton, P. C. (2017). Juno Perijove 1 radio occultation of the Io plasma torus, Abstract 279802 presented at 2017 Fall Meeting, AGU, New Orleans, LA, 11-15 Dec.

Phipps, P.H. & Withers, P. (2017), Radio occultations of the Io plasma torus with the *Juno* Spacecraft: A study of feasibility, Magnetospheres of Outer Planets conference, Uppsala, Sweden, 12-16 June

Phipps, P.H. & Withers, P. (2016). Feasibility of Juno radio occultations of the Io plasma torus, Abstract 178300 presented at 2016 Fall Meeting, AGU, San Francisco, Calif., 12-16 Dec.

Phipps, P.H. & Clarke, J.T. (2015). Calculation of the Auroral Color Ratio of the Gas Giants Using Images, IAU General Assembly, Meeting #29, #2258018

Publications

Phipps, Phillip H., Withers, Paul, Buccino, Dustin R., Yang, Yu-Ming, and Parisi, Marzia (submitted), Variations in the density distribution of the Io plasma torus as seen by radio occultations on Juno Perijoves 3, 6, and 8, J. Geophys. Res. Space Physics

Phipps, Phillip H., Withers, Paul, Buccino, Dustin R., and Yang, Yu-Ming (2018), Distribution of plasma in the Io plasma torus during *Juno* Perijove 1, J. Geophys. Res. Space Physics, 123, DOI:10.1029/2017JA025113

Phipps, Phillip H. and Withers, Paul (2017), Radio occultations of the Io plasma torus by *Juno* are feasible, J. Geophys. Res. Space Physics, 122, DOI: 10.1002/2016JA023447

Seminars

Phipps, Phillip H., Withers, Paul, Buccino, Dustin R., and Yang, Yu-Ming (2018) Juno observations of the Io plasma torus during Perijoves 3, 6, and 8, Oct.15, Invited talk in Radio Science Systems Group, Jet Propulsion Laboratory, California Institute of Technology

Phipps, Phillip H., Oudrhiri, Kamal, Withers, Paul, Buccino, Dustin R., and Yang, Yu-Ming (2017) Juno observations of the Io plasma torus, Aug. 31, Summer Internship Talk in Radio Science Systems Group, Jet Propulsion Laboratory, California Institute of Technology