

Phillip H. Phipps

Curriculum Vitae

Center for Space Physics, Boston University
725 Commonwealth Avenue, Room 406b
Boston, MA 02215

email: phhipps at bu dot edu
website: philliphipps.space

Education

Ph.D. Astronomy	2019
	Department of Astronomy, Boston University
M.A. Astronomy	2015
	Department of Astronomy, Boston University
B.S. Physics with Honors	2013
B.S. Applied Mathematics with Honors	North Carolina State University

Research Experience

Graduate Researcher	Summer 2015 – April 2019
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 Spring 2014
 Department of Astronomy
 Boston University, Boston, MA

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

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

Outreach

Boston University Open Nights Spring 2015 – Present
 Helped run BU public open nights
 Science by the pint January 2016
 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/>
 Open night for Metropolitan College group December 2015
 Managed an open night for the Boston University honor society
 of metropolitan college.
 Lunar eclipse viewing September 2015
 Managed a BU public event for the viewing of the Lunar eclipse
 at Boston University's Coit Observatory.

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

AAS International Travel Grant (\$2535.53) April 2019
 For travel to MOP 2019 in Sendai, Japan
 Magnetospheres of Outer Planets (MOP) Travel Grant (\$1500) April 2017

For Travel to MOP 2017 meeting in Uppsala, Sweden	
JPL Summer 2017 Internship, June 26 th - Sept 2 nd (\$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