

# Phillip H. Phipps

## *Curriculum Vitae*

Center for Space Physics, Boston University  
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Boston, MA 02215

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### 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

Postdoctoral Researcher	2019
Advisor: Prof. Paul Withers	
Department of Astronomy, Boston University, Boston, MA	
Research on the Io Plasma Torus around Jupiter.	
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

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**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 <sup>th</sup> - Sept 2 <sup>nd</sup> (\$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	

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**Seminars**

Juno Observations of the Io plasma torus, GSFC Solar System Exploration Spring Seminar Series, April 17, 2019

Juno Observations of the Io plasma torus, JPL seminar, October 15, 2018

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**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
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**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
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