


## KERRIN G. HENSLEY

Boston University Department of Astronomy  
725 Commonwealth Avenue Rm. 514  
Boston, MA 02215

khens@bu.edu  
 astrokhensley

### EDUCATION

**Boston University**, Boston, MA  
*PhD*, Astronomy, in progress  
*MA*, Astronomy, May 2017

**Williams College**, Williamstown, MA  
*BA*, Astrophysics and Chinese, June 2014

### RESEARCH POSITIONS

**Graduate Research Assistant** 2016 – Present  
*Boston University; Dr. Paul Withers*

**Sally Ride Undergraduate Research Intern** 2014  
*Jet Propulsion Laboratory; Dr. Bonnie Buratti*

**Undergraduate Research Assistant** 2013 – 2014  
*Williams College; Dr. Karen Kwitter*

### RESEARCH INTERESTS

My research focuses on a layer of charged particles in the upper atmosphere of Venus called the ionosphere. In particular, I want to understand how solar activity—solar flares, the 11-year solar cycle, etc.—affects the density, extent, and composition of the ionosphere of Venus.

### HONORS & AWARDS

<b>Venus Exploration and Analysis Group (VEXAG) Travel Grant</b>	2019
<b>Future Investigators in NASA Earth and Space Science and Technology (FINESST) Grant</b>	2019
<b>Massachusetts Space Grant Consortium Graduate Fellowship</b>	2019
<b>AAAS Mass Media Science &amp; Engineering Fellowship</b>	2019
<b>AAS Media Fellowship</b>	2018
<b>Ewha-Luce International Seminar</b>	2017
<b>Clare Boothe Luce Graduate Fellowship</b>	2016
<b>Departmental Honors in Astrophysics</b>	2014
<b>Williams College Latin Honors</b>	2014
<b>Fulbright English Teaching Assistantship</b>	2014

## INVITED TALKS

LIVING WITH A STAR: FROM THE SUN TO PROXIMA CENTAURI

BU Center for English Language and Orientation Programs, Boston, MA, Feb. 2019

BU Center for English Language and Orientation Programs, Boston, MA, Aug. 2018

## SELECTED PRESENTATIONS

SOLAR ACTIVITY VARIATIONS OF THE IONOSPHERES OF VENUS AND MARS

American Geophysical Union Fall Meeting, San Francisco, CA, December 2019

FROM SCIENCE TO SCI COMM

Boston University Student Seminar, Boston, MA, November 2019

RESPONSE OF THE VENUSIAN IONOSPHERE TO SOLAR CYCLE VARIATIONS

Boston University Student Seminar, Boston, MA, April 2019

VARIATIONS OF THE TOPSIDE VENUS IONOSPHERE

Boston University Oral PhD Qualifying Exam, Boston, MA, May 2018

VARIATIONS IN THE TOPSIDE VENUS IONOSPHERE

Mars/Venus Express Radio Science Team Meeting, Truckee, CA, October 2017

Boston University Student Seminar, Boston, MA, October 2017

RADIO OCCULTATION SCIENCE EXPERIMENT (ROSE)

Mars/Venus Express Radio Science Team Meeting, Truckee, CA, October 2017

TERRESTRIAL PLANET IONOSPHERES & EMERGING ISSUES IN ASTRONOMY

Ewha-Luce International Seminar, Seoul, South Korea, July 2017

CHARACTERIZING IONOSPHERIC VARIABILITY AT VENUS

Boston University Student Seminar, Boston, MA, March 2017

TITAN'S NORTH POLAR LAKES

NASA Summer Research Intern Final Presentation, Pasadena, CA, July 2014

PLANETARY NEBULAE AS TRACERS OF THE CHEMICAL HISTORY OF ANDROMEDA

Physics and Astronomy Honors Thesis Presentation, Williamstown, MA, May 2014

## REFEREED PUBLICATIONS

DEPENDENCE OF DAYSIDE ELECTRON DENSITIES AT VENUS ON SOLAR IRRADIANCE

**Hensley, K.**, Withers, P., Girazian, Z., Paetzold, M., Tellmann, S., & Hausler, B. 2020, *JGR: Space Physics*, in press. [doi:10.1029/2019JA027167](https://doi.org/10.1029/2019JA027167)

THE CHEMISTRY OF PLANETARY NEBULAE IN THE OUTER REGIONS OF M31

Corradi, R.L.M., Kwitter, K.B., Balick, B., Henry, R.B.C., & **Hensley, K.** 2015, *ApJ*, 807, 181. [doi:10.1088/0004-637X/807/2/181](https://doi.org/10.1088/0004-637X/807/2/181)

## PUBLISHED ABSTRACTS

RESPONSE OF VENUS'S TOPSIDE IONOSPHERE TO CHANGES IN SOLAR ACTIVITY

**Hensley, K.**, Withers, P., Girazian, Z., Paetzold, M., Tellmann, S., & Hausler, B. 2018, DPS Meeting Abstracts, 50, 119.09

ABUNDANCES IN EIGHT M31 PLANETARY NEBULAE

**Hensley, K.**, Kwitter, K., Corradi, R., Galera-Rosillo, R., Balick, B., & Henry, R.B.C. 2014, AAS Meeting Abstracts, 224, 121.08

USING PNE TO EXPLORE THE HISTORY OF M31'S EXTENDED DISK

Balick, B., Kwitter, K., Corradi, R., **Hensley, K.**, & Henry, R.B.C. 2014, AAS Meeting Abstracts, 224, 121.14

## OUTREACH, MENTORING & SERVICE

**Astronomy Department Representative**

2019 – Present

Boston University Graduate Student Organization

**Pen Pal**

2018 – Present

Letters to a Pre-Scientist

I exchanged letters with a sixth-grade student from Chicago. The goal of LPS is to demystify science and make scientists more accessible, especially to students in low-income areas who may have little exposure to scientists.

**Graduate Mentor**

2016 – 2017

Grad. Women in Science and Engineering

I served as an academic and professional development mentor for Boston University biomedical engineering student Xiaoshan Ke.

**Research Mentor**

2016

BU Research in Science & Engineering

I mentored high school student Arthur Chen on a research project that used radio occultations to map the climate of the atmosphere of Venus.

## SCIENCE WRITING

**Voice of America** [[12 articles](#)]

2019

**AAS Nova** [[40 articles](#)]

2018 – 2019

**Astrobites** [[18 articles](#)]

2017 – 2018

**Baen Books Free Nonfiction** [[Small Stars](#); [Plasma Frequency](#)]

2018, 2019