

# HANNAH BISH

hvbish@uw.edu  $\diamond$  hannahbish.com

University of Washington, Department of Astronomy

3910 15th Ave NE B323, Seattle WA 98195-0002

## EDUCATION

---

**Ph.D. Astronomy (expected)**, University of Washington expected 2022

Advisor: Prof. Jessica Werk

Ph.D. Thesis: *CGM Gas Flows in the Milky Way*

**M.S. Astronomy**, University of Washington 2016

**B.S. Astrophysics**, Rutgers University 2014

Advisor: Prof. Eric Gawiser

Senior Thesis: *Ly- $\alpha$  Emission in High-Redshift Galaxies*

## APPOINTMENTS

---

**Graduate Research Assistant**, University of Washington 2016 - present

Research: *Kinematics & Structure of Gas Flows in the Galactic Halo*

Advisor: Prof. Jessica Werk

**Teaching Assistant**, University of Washington 2014 - 2016

Courses Taught: Intro Astronomy (ASTR 101), The Planets (ASTR 150)

**Research Assistant**, Rutgers University 2012 - 2014

Research: *Ly- $\alpha$  Emission Strength in Star-Forming Galaxies*

Advisor: Prof. Eric Gawiser

**REU Student**, American Museum of Natural History 2010

Research: *High Proper Motion Stars in the SUPERBLINK Survey*

Advisor: Prof. Sebastien Lepine

## HONORS AND AWARDS

---

Co-I on successful HST Proposal (HST-GO-16679), 71 orbits 2021

Graduate Student Prize for Research Excellence, University of Washington 2019

Graduate Student Presentation Award, Wolfe Symposium in Astrophysics 2018

Co-I on successful HST Proposal (HST-GO-15154), 17 orbits 2017

ARCS Graduate Fellowship 2014 - 2017

Magna cum laude, Rutgers University 2014

Honors thesis in Astrophysics, Rutgers University 2014

Aresty Research Center Grant 2013

Richard J. Plano Summer Research Internship Award 2013

Rutgers University Academic Excellence Award 2013

## TEACHING, MENTORING, AND OUTREACH

---

<i>Mentor</i> , Pre-Major in Astronomy Program (Pre-MAP), University of Washington	2016 - 2020
Supervised research of four undergraduate students	
<i>Speaker</i> , Everett Astronomical Society, Everett WA	2019
<i>Speaker</i> , Astronomy on Tap, Seattle WA	2019
<i>Volunteer</i> , Meany Middle School Astronomy Outreach, Seattle WA	2019
<i>Organizer</i> , EquiTea, University of Washington	2017 - 2019
<i>Volunteer</i> , ARCS educational astronomy for children & parents, Seattle WA	2017
<i>Volunteer</i> , Planetarium presenter for visiting groups, University of Washington	2016 - 2017
<i>Lecturer</i> , Astronomy course for middle school girls, University of Washington	2016
<i>Teaching Assistant</i> , University of Washington	2014 - 2016
ASTR 101: Intro Astronomy, four terms	
ASTR 150: The Planets, two terms	

## PUBLICATIONS

---

1. **Bish, H.V.**, Werk, J.K., Di Teodoro, E.M., Peek, J.E.G., Putman, M.E., Zheng, Y. “*The Sandwich Model: Kinematics of a Warm Extended Disk in the Milky Way’s Circumgalactic Medium*” (in prep.)
2. **Bish, H.V.**, Werk, J.K., Peek, J.E.G., Putman, M.E., Zheng, Y. “*QuaStar: Measuring the Milky Way’s Obscured Low-Velocity Circumgalactic Medium*” 2021, ApJ, 912, 8
3. **Bish, H.V.**, Werk, J.K., Prochaska, J.X.; Rubin, K.H.R.; Zheng, Y.; O’Meara, J.M.; Deason, A.J. “*Galactic Gas Flows from Halo to Disk: Tomography and Kinematics at the Milky Way’s Disk-Halo Interface*” 2019, ApJ, 882, 76
4. Werk, J.K., Rubin, K.H.R., **Bish, H.V.**; Prochaska, J.X.; Zheng, Y.; O’Meara, J.M.; Lenz, D.; Hummels, C.; Deason, A.J. “*The Nature of Ionized Gas in the Milky Way Galactic Fountain*” 2019, ApJ, 887, 89
5. Vargas, C.J., **Bish, H.V.**, Acquaviva, V., Gawiser, E.J., Finkelstein, S.L., Ciardullo, R., Ashby, M., Feldmeier, J., Ferguson, H., Gronwall, C., Guaita, L., Hagen, A., Koekemoer, A., Kurczynski, P., Newman, J., & Padilla, N. “*To Stack or Not to Stack: Spectral Energy Distribution Properties of Ly-Emitting Galaxies at  $z=2.1$* ”. 2013, ApJ, 783, 26.

## PRESENTATIONS

---

### ORAL:

AAS #236 205.03 - <i>QuaStar: A First Look at the Milky Way’s Hidden CGM</i>	2020
Wolfe Symposium in Astrophysics - <i>Milky Way Gas Kinematics at the Disk-Halo Interface</i>	2018
MUSYC LAE Meeting - <i>SED Properties of <math>z \sim 2-3</math> LAEs</i>	2013
Rutgers University - <i>MCMC SED Fitting in CANDELS</i>	2013
Tri-State Astronomy Conference - “ <i>Physical Properties of LAEs at <math>z = 2.1</math></i> ”	2013
CANDELS Team Meeting - <i>To Stack or Not to Stack: SED Properties of <math>z=2.1</math> LAEs</i>	2013
MUSYC LAE Meeting - <i>SpeedyMC Results for <math>z=2.1</math> LAEs with CANDELS SEDs</i>	2012

### POSTERS:

AAS #225 143.55 - <i>What Determines the Strength of Ly<math>\alpha</math> Emission in Star-Forming Galaxies?</i>	2015
AAS #223 145.05 - <i>To Stack or Not to Stack: Physical Properties of LAEs at <math>z = 2.1</math></i>	2014
AAS #221 147.32 - <i>Physical Properties of Lyman Alpha Emitters in CANDELS</i>	2013