

# BERYL HOVIS-AFFLERBACH

ASTRONOMY PHD STUDENT

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## EDUCATION

- 2023 - present **Northwestern University** Evanston, IL  
PhD student in Astronomy  
Advisor: Prof. Allison Strom
- 2018 - 2023 **California Institute of Technology** Pasadena, CA  
Bachelor of Science, Astrophysics

## PUBLICATIONS

*The Mass Distribution of Stars Stripped in Binaries: The Effect of Metallicity*

**Hovis-Afflerbach, B.**, Göteborg, Y., Schootemeijer, A., Klencki, J., Strom, A. L., Ludwig, B. A., Drout, M. R., 2025, *A&A* accepted

*Partially Erupted Prominence Material as a Diagnostic of Coronal Mass Ejection Trajectory*

**Hovis-Afflerbach, B.**, Thompson, B. J., & Mason, E. I., 2023, *Space Weather*, 21, e2022SW003256

*Two New Methods for Counting and Tracking the Evolution of Polar Faculae*

**Hovis-Afflerbach, B.** & Pesnell, W. D., 2022, *Sol Phys*, 297, 48

*Identifying and Repairing Catastrophic Errors in Galaxy Properties Using Dimensionality Reduction*

**Hovis-Afflerbach, B.**, Steinhardt, C. L., Masters, D., & Salvato, M. 2021, *ApJ*, 908, 148

*The BUFFALO HST Survey*

Steinhardt, C. L., et al., incl. **Hovis-Afflerbach, B.**, 2020, *ApJS*, 247, 1538

## AWARDS & FUNDING

- |            |  |                        |
|------------|--|------------------------|
| 2023       | NSF Graduate Research Fellow                       | NSF                    |
| 2022       | Vodopia-Hasson Poster Competition Award            | Caltech                |
| 2021       | Chambliss Undergraduate Poster Award, AAS 238      | AAS                    |
| 2021       | Perpall Speaking Competition Semifinalist          | Caltech                |
| 2021       | Carnegie Observatories Summer Student Poster Award | Carnegie Observatories |
| 2019, 2022 | George W. Housner Fund Recipient                   | Caltech                |
| 2018       | National Merit Scholar                             | NMSC                   |
| 2018       | NASA GSFC Intern Research Poster Session Finalist  | NASA GSFC              |
| 2017       | NASA GSFC Intern Research Poster Session Award     | NASA GSFC              |

## SELECTED ACADEMIC PRESENTATIONS

2024 / 05 Poster	<b>Missing Massive Stripped Stars at Low Metallicity: Implications for High-Redshift Galaxies</b> First Stars VII	Flatiron Institute
2024 / 02 Talk	<b>Missing Massive Stripped Stars at Low Metallicity</b> CIERA Theory Group meeting	Northwestern University
2023 / 01 Poster	<b>A New Way to Model the Pre-Supernova Evolution of 8-11 M<sub>⊙</sub> Stars</b> American Astronomical Society, AAS Meeting #241	AAS
2022 / 06 Poster	<b>Testing Late Stellar Expansion with Populations of Stars Stripped in Binaries</b> American Astronomical Society, AAS Meeting #240	AAS
2021 / 06 Poster	<b>Two New Methods for Counting and Tracking the Evolution of Polar Faculae</b> American Astronomical Society, AAS Meeting #238, won Chambliss Award	AAS

## MENTORSHIP

2024 - present	<b>Physics &amp; Astronomy graduate student peer mentoring</b> Peer mentor for 2 first year graduate students.	Northwestern University
2022 & 2023	<b>Mentor for undergraduate students in CASSI summer program</b> As program alum, served as a mentor and resource to 2 in 2022, 1 in 2023.	Carnegie Observatories

## OUTREACH

2025 Volunteer	<b>CIERA Reaches Out to Chicago Schools (CROCS)</b> Visited local high schools and gave presentations and demonstrations on spectroscopy and gravitational waves.	Northwestern University
2024 - present Volunteer	<b>Astronomy Conversations</b> Held discussions with visitors to the planetarium and answered questions about astronomy, in the Adler Planetarium's Space Visualization Lab.	Adler Planetarium
2023 - present Volunteer, public talk	<b>Astronomy on Tap</b> Helped organize and run events for Chicago Astronomy on Tap. Gave public talk on binary stars.	Northwestern University
2020 & 2021 Panelist	<b>Upward Bound College Panel</b> Answered questions from potential first-generation college students about college, admissions, and astronomy.	Carnegie Observatories
2021 Panelist	<b>International Women's Day Panel</b> Talked about careers in astronomy and answered questions about research, mentorship, and succeeding as a woman in STEM.	Girl Up Club at Highland Park High School

## LEADERSHIP & SERVICE

2025 - present	<b>CIERA Stars Meeting</b> Started and organized biweekly meeting to bring together people who are interested in stars from different perspectives to share research, discuss recent papers and results, and find opportunities for collaboration.	Northwestern University
2024 - present	<b>Physics &amp; Astronomy Graduate Student Council Secretary</b> Advocated for grad students in department, maintained website and mailing list, sent weekly emails, took meeting minutes.	Northwestern University
2019 - 2022	<b>Equity &amp; Title IX Advocate</b> Provided support for peers in cases relating to Equity & Title IX violations. Organized meetings to welcome new students and share Title IX resources.	Caltech
2019 - 2022	<b>Board of Control Representative</b> Heard cases regarding alleged academic Honor Code violations, >100 hours.	Caltech
2021	<b>CASSI DEI Programming</b> Helped lead DEI discussions for Carnegie Observatories summer program.	Carnegie Observatories

## TEACHING EXPERIENCE

2025 / Spring	<b>ASTRON 220-1 — Intro to Astrophysics I</b> Teaching assistant for introductory course on the origin and evolution of star/planet systems, focusing on underlying physical processes and observational techniques.	Northwestern University
2025 / Winter	<b>PHYSICS 135-3 — General Physics</b> Teaching assistant for introductory waves & optics.	Northwestern University
2024 / Fall	<b>PHYSICS 135-2 — General Physics</b> Teaching assistant for introductory electricity & magnetism.	Northwestern University

## SOFTWARE & LANGUAGES

Python ♦ MESA ♦ Cloudy ♦ Pypelt ♦ Linux ♦ IDL ♦ HTML ♦ CSS