

# BERYL HOVIS-AFFLERBACH

## ASTRONOMY PHD STUDENT

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## EDUCATION

2023 - present	<b>Northwestern University</b>	Evanston, IL
	PhD student in Astronomy; advisor: Prof. Allison Strom	
	Master of Science, Astronomy, June 2025	
2018 - 2023	<b>California Institute of Technology</b>	Pasadena, CA
	Bachelor of Science, Astrophysics, June 2023	

## 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*, 697, A239

*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

2025 / 09 Talk	<b>Finding He II: Testing Novel Models of Binary Populations Across Cosmic Time</b> IAUS 402: Massive stars across redshifts in the era of JWST and large surveys	UNAM, Ensenada, B.C. México
2025 / 05 Poster	<b>Testing Novel Models of Binary Populations Across Cosmic Time</b> Inaugural Cosmic Frontier Center Conference	Cosmic Frontier Center, UT Austin
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

2025 - present	<b>CIERA mentorship network</b> Mentor for freshman undergraduate student in astronomy.	Northwestern University
2024 - present	<b>Physics &amp; Astronomy graduate student peer mentoring</b> Peer mentor for 2 first year graduate students.	Northwestern University
2022 - present	<b>Mentor for undergraduate students in CASSI summer program</b> As program alum, served as a mentor to 1-2 students each summer.	Carnegie Observatories

## OUTREACH

2024 - present	<b>Research Experiences in Astronomy at CIERA for High School Students (REACH)</b> Developed and presented introductory presentation about stars including interactive component, served on panels, python coding tutor.	Northwestern University
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 events for Chicago chapter; 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 for those interested in stars from different perspectives to share research, discuss recent papers and results, and find opportunities for collaboration.	Northwestern University
2025 - present	<b>President, Physics &amp; Astronomy Graduate Student Council</b>	Northwestern University
2024 - 2025	<b>Secretary, Physics &amp; Astronomy Graduate Student Council</b>	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