

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	
	Master of Science, Astronomy, June 2025	
2018 - 2023	California Institute of Technology	Pasadena, CA
	Bachelor of Science, Astrophysics, June 2023	

PUBLICATIONS

The mass distribution of stars stripped in binaries: The effect of metallicity

Hovis-Afflerbach, B., Götberg, 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
2022	George W. Housner Fund Recipient	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	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	Finding He II: Testing Novel Models of Binary Populations Across Cosmic Time	UNAM, Ensenada, B.C. México
Talk	IAUS 402: Massive stars across redshifts in the era of JWST and large surveys	
2025 / 05	Testing Novel Models of Binary Populations Across Cosmic Time	Cosmic Frontier Center, UT Austin
Poster	Inaugural Cosmic Frontier Center Conference	
2024 / 05	Missing Massive Stripped Stars at Low Metallicity: Implications for High-Redshift Galaxies	Flatiron Institute
Poster	First Stars VII	
2024 / 02	Missing Massive Stripped Stars at Low Metallicity	Northwestern University
Talk	CIERA Theory Group meeting	
2023 / 01	A New Way to Model the Pre-Supernova Evolution of 8-11 M_⦿ Stars	AAS
Poster	American Astronomical Society, AAS Meeting #241	
2022 / 06	Testing Late Stellar Expansion with Populations of Stars Stripped in Binaries	AAS
Poster	American Astronomical Society, AAS Meeting #240	
2021 / 06	Two New Methods for Counting and Tracking the Evolution of Polar Faculae	AAS
Poster	American Astronomical Society, AAS Meeting #238, won Chambliss Award	

MENTORSHIP

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

OUTREACH

2024 - present	Research Experiences in Astronomy at CIERA for High School Students (REACH) Developed and presented introductory presentation about stars including interactive component, served on panels, python coding tutor.	Northwestern University
2025	CIERA Reaches Out to Chicago Schools (CROCS)	Northwestern University
Volunteer	Visited local high schools and gave presentations and demonstrations on spectroscopy and gravitational waves.	
2024 - present	Astronomy Conversations Held discussions with visitors to the planetarium and answered questions about astronomy, in the Adler Planetarium's Space Visualization Lab.	Adler Planetarium
2023 - present	Astronomy on Tap Volunteer, public talk Helped organize events for Chicago chapter; gave public talk on binary stars.	Northwestern University

2020 & 2021	Upward Bound College Panel	Carnegie Observatories
Panelist	Answered questions from incoming first-generation college students about college, admissions, and astronomy.	
2021	International Women's Day Panel	Girl Up Club at Highland Park High School
Panelist	Talked about careers in astronomy and answered questions about research, mentorship, and succeeding as a woman in STEM.	

LEADERSHIP & SERVICE

2026 - present	Referee, The Astrophysical Journal (ApJ)	AAS
2025 - present	CIERA Stars Meeting 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	President, Physics & Astronomy Graduate Student Council	Northwestern University
2025-2026	Science Editor, CIERA 15th Anniversary Coffee Table Book	Northwestern University
2024 - 2025	Secretary, Physics & Astronomy Graduate Student Council	Northwestern University
2019 - 2022	Equity & Title IX Advocate 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	Board of Control Representative Heard cases regarding alleged academic Honor Code violations, >100 hours.	Caltech
2021	CASSI DEI Programming Helped lead DEI discussions for Carnegie Observatories summer program.	Carnegie Observatories

TEACHING EXPERIENCE

2025 / Spring	ASTRON 220-I — Intro to Astrophysics I 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	PHYSICS 135-3 — General Physics Teaching assistant for introductory waves & optics.	Northwestern University
2024 / Fall	PHYSICS 135-2 — General Physics Teaching assistant for introductory electricity & magnetism.	Northwestern University

SOFTWARE & LANGUAGES

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