

# Arielle C. Frommer

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## Education

**Harvard University** **Cambridge, MA**  
A.B. in Astrophysics & Physics September 2021–May 2025  
Cum Laude with Highest Honors in Field — GPA: 3.9/4.0

## Publications

**Frommer, A. C.**, J. Eastman, D. Ciardi, et al. (submitted to the AAS Journals). [A Paradigm Shift in Exoplanet False Positive Identification with HIP-44302](#).

Heidari, N., Hébrard, G., Martioli, E., et al. including **Frommer, A. C.** (2025) [Characterization of seven transiting systems, including four warm Jupiters from SOPHIE and TESS](#). A&A, 694, A36.

Law, C. J., Zhang, Q., **Frommer, A. C.**, et al. (2024) [A Wideband Chemical Survey of Massive Star-forming Regions at Subarcsecond Resolution with the Submillimeter Array](#). ApJS, 276, 54.

## Research Experience

**Leiden Observatory** **Leiden, the Netherlands**  
Post-Bacc Research September 2025–present  
*Advisor:* Prof. Ignas Snellen  
*Project:* Constraining CO Isotope Abundances in the JWST Spectrum of WASP-39b

**Center for Astrophysics | Harvard & Smithsonian** **Cambridge, MA**  
Senior Thesis Research September 2024–present  
*Advisors:* Dr. Jason Eastman and Prof. Andrew Vanderburg  
*Project:* Improving TESS Systematic Corrections with Machine Learning

Junior Thesis Research September 2023–November 2025  
*Advisor:* Dr. Jason Eastman  
*Project:* Modeling the Triple-Star System HIP-44302 Using EXOFASTv2

Summer Research June 2022–May 2023  
*Advisors:* Dr. Qizhou Zhang and Dr. Charles Law  
*Project:* Probing Nitrile Chemistry in Massive Star Formation

**University of Washington Institute for Nuclear Theory** **Seattle, WA**  
NSF REU June 2024–August 2024  
*Advisors:* Dr. Vincenzo Cirigliano and Dr. Yukari Yamauchi  
*Project:* Simulating Neutrino Many-Body Systems

## Awards, Grants, and Fellowships

Alex G. Booth Fellowship, Harvard University (\$15.8k)	2025
Fulbright Netherlands Semi-Finalist, Fulbright U.S. Student Program	2025
Chambliss Astronomy Achievement Student Award, American Astronomical Society	2025
Distinguished Undergraduates Honorable Mention, USRA	2024
Conference Funding Grant for AAS, Harvard University (\$1k each)	2022, 2023, 2024
Leo Goldberg Prize for Best Junior Thesis, Harvard Astronomy Department (\$600)	2024
Harvard College Research Program, Harvard University (\$1k each)	2022, 2023
Summer Program for Undergraduates in Data Science, Harvard University (\$3k)	2022

## Presentations

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### Using Machine Learning to Improve TESS's Systematic Corrections and Find More Planets

June 2025

246th AAS meeting in Anchorage, AK

*Presented poster on senior thesis research, awarded a Chambliss Astronomy Achievement Student Award in the undergraduate category*

### Using Machine Learning to Improve TESS's Systematic Error

January 2025

245th AAS meeting in National Harbor, MD

*Presented poster on preliminary results of senior thesis*

### Analyzing Radial Velocity Measurements from MINERVA

January 2024

243rd AAS meeting in New Orleans, LA

*Gave 5-minute talk on junior thesis research*

### A Survey of Nitrile Chemistry in Massive Star-Forming Regions

January 2023

241st AAS meeting in Seattle, WA

*Gave 5-minute talk on summer research*

## Work Experience

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### Sky & Telescope

Cambridge, MA

Freelance journalist

April 2024–present

*Writes news and feature pieces covering astronomy discoveries for online blog and print magazine*

### Harvard Art Museums

Cambridge, MA

Ho Family Student Guide

September 2022–May 2025

*Developed two original tours on art & astronomy and art & poetry for the general public*

### Disperitech

Amsterdam, the Netherlands

Data Analytics Intern

June 2023–August 2023

*Ran experimental measurements on the start-up Disperitech's nanotechnology devices and wrote code to analyze output and evaluate instrument performance*

## Activities & Outreach

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### Astronomy on Tap Leiden

Leiden, the Netherlands

Committee Member

October 2025–present

*Helps organize monthly public talks by astronomers at local pubs to promote astronomy outreach*

### Harvard Undergraduate Astronomy Society

Cambridge, MA

Co-President (2024–2025), Co-Social Chair (2023–2024)

May 2023–May 2025

*Built community for undergraduate astronomy students by planning weekly events, informative panels, and mentorship initiatives*

### Harvard Crimson Arts Board

Cambridge, MA

Editor-at-Large (2024), Culture Editor (2023)

January 2023–December 2024

*Wrote and edited reviews and articles for the Arts section of The Harvard Crismon student newspaper*

### Harvard Advising Programs Office

Cambridge, MA

Peer Advising Fellow

September 2022–May 2024

*Mentored 8-10 freshman advisees and organized weekly study breaks within their dorm to build community*

### Harvard First-Year Outdoor Program and Harvard Outing Club

Cambridge, MA

Pre-Orientation Leader

January 2023–May 2025

*Led backpacking trips for freshmen prior to orientation and day trips during the year to foster community and appreciation for the outdoors*

### PBHA Franklin Afterschool Enrichment Program

Cambridge, MA

Volunteer

September 2021–May 2022

*Tutored elementary school students in Dorchester and organized engaging activities and field trips*

## Interests

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**Research Interests:** exoplanets, planet formation, habitability, astrochemistry, machine learning

**Coding languages:** Python, Unix/Linux, IDL, Git/Github, Excel, DS9, IRAF, CASA

**Hobbies:** science writing, creative writing, hiking, dance, reading, piano, crocheting