

# Arielle C. Frommer

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## Education

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### Harvard University

A.B. in Astrophysics & Physics  
Cum Laude with Highest Honors in Field — GPA: 3.9/4.0

Cambridge, MA

September 2021–May 2025

## Publications

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**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

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### Leiden Observatory

Post-Bacc Research

*Advisor:* Prof. Ignas Snellen

*Project:* Constraining CO Isotope Abundances in the JWST Spectrum of WASP-39b

Leiden, the Netherlands

September 2025–present

### Center for Astrophysics | Harvard & Smithsonian

Senior Thesis Research

*Advisors:* Dr. Jason Eastman and Prof. Andrew Vanderburg

*Project:* Improving TESS Systematic Corrections with Machine Learning

Cambridge, MA

September 2024–present

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

NSF REU

Seattle, WA

June 2024–August 2024

*Advisors:* Dr. Vincenzo Cirigliano and Dr. Yukari Yamauchi

*Project:* Simulating Neutrino Many-Body Systems

## Awards, Grants, and Fellowships

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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*

**Dispertech**

**Amsterdam, the Netherlands**

Data Analytics Intern

June 2023–August 2023

*Ran experimental measurements on the start-up Dispertech'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 Crimson 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