

EMELINE F. FROMONT

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Research Interests: My research focuses on modeling atmospheric circulation, cloud formation, and radiative feedback of hot/ultra-hot Jupiters, using a 3D atmospheric circulation model, microphysics model, and radiative transfer models. I am interested in the impact of clouds on our interpretation of hot/ultra-hot Jupiter observations in the era of JWST.

Education

PhD in Astronomy, University of Maryland	Anticipated 2028
MSc in Astronomy, University of Maryland	2024
BS in Physics/Astrophysics, Carnegie Mellon University	2021

Research & Professional Experience

- **Graduate Research Assistant** 2022-Present
Department of Astronomy, University of Maryland
- **Post-baccalaureate Researcher** 2021-2022
NASA Goddard/University of Maryland Baltimore County
- **Undergraduate Research Assistant** 2021
Physics Department, Carnegie Mellon University
- **Summer Research Intern** 2020
NASA Goddard Space Flight Center
- **Data Science Intern** 2019
MindMics Inc.
- **Undergraduate Research Assistant** 2018-2019
Physics Department, Carnegie Mellon University

Service & Outreach

- Graduate Student Council Member, UMD Astronomy 2026-Present
- Journal referee: ApJ 2025
- GRAD-MAP Outreach speaker, Prince George's Community College 2025
- GRAD-MAP Outreach speaker, Anne Arundel Community College 2025
- Letters to a Pre-Scientist (STEM pen-pal for a middle school student) 2025-Present
- International Observe the Moon Night communicator, UMD Astronomy 2025
- Maryland Day communicator, UMD Astronomy 2025

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| • Prospective Graduate Student Visit Coordinator, UMD Astronomy | 2024-2025 |
| • Community And Belonging Committee Member, UMD Astronomy | 2023-Present |
| • Better Astronomy for a New Generation Seminar Host, UMD Astronomy | 2022-2024 |
| • Society of Physics Students Vice President, CMU Physics | 2019-2021 |
| • Physics Steering Committee Member, CMU Physics | 2020-2021 |

Honors & Awards

- University of Maryland Graduate School Dean's Fellowship 2022 & 2026
- Carnegie Mellon University Honors
- Mellon College of Science College Honors
- Mellon College of Science Dean's List High Honors
- Sigma Pi Sigma Honors
- Phi Beta Kappa Honors

DPS Candidate Statement 2026

Due to the increasing competitiveness of planetary sciences and the deep funding cuts to science in the United States, it has become increasingly difficult for recent graduates to secure stable positions. Seeing brilliant and hard-working graduate students around me struggling to find funding for a 6th or 7th year after receiving no positive news from their many postdoc applications has made it clear to me how directly early career researchers in our field are being impacted by these recent developments. This difficult job market has particularly affected members of historically underrepresented communities, further aggravating the already-present issues of retention of these groups in planetary science. As our field moves forward, it will be crucial to develop and deploy additional support mechanisms to guide students as they navigate graduate school and the transition beyond their PhDs.

I began my career in science by studying physics in undergrad, hoping to someday go into the space industry. Although I was curious about planetary sciences, I never considered it a potential career as it was not studied at my undergraduate institution. I also had very little understanding of what career options lay beyond my Bachelors, until I participated in an internship studying exoplanets. This opened a network of possibilities for what I could do in the future. After a post-bac focused on exoplanet atmospheres, I decided to pursue a PhD in astronomy studying cloud formation in hot Jupiters. In graduate school, I became passionate about improving conditions for graduate students in my department and participating in outreach to bring astronomy and planetary science to my community. I co-hosted a seminar highlighting rarely discussed topics relevant to science grads, from non-academic career paths to neurodivergence. I also currently serve on the Community and Belonging committee and the Graduate Student Council of my department, where I have organized mentoring programs for incoming grads and advocated for department-wide accessibility needs.

As a woman in STEM, I have experienced my fair share of imposter syndrome and microaggressions throughout undergrad and grad school. Although things have gotten better for me over the years, I know that is not the case for everyone: experiencing a feeling of belonging is paramount to one's ability to continue in a domain, and outreach initiatives both in early education and undergrad are necessary to support the retention of members from underrepresented groups in planetary science. Moving through graduate school, I have also learned that access to opportunities for employment and collaborations often come from having specific connections with other scientists, which can often be determined by chance. Widespread access to career resources would allow students to be more prepared and informed about their options before they graduate.

I hope that my passion to improve our field will inspire more productive and compassionate conversations that lead to change. If elected, I will carefully listen to student concerns and work to address them with the DPS. I will help provide more options to engage the planetary science community through outreach opportunities, fostering conversations between planetary scientists and the public. Finally, I will work to improve access to job and career resources, emphasizing opportunities for students. Thank you very much for your consideration.