KRIS LAFERRIERE

Curriculum Vitae

603 718-0965 ⋄ klafer49@gmail.com

EDUCATION

Purdue University, West Lafayette, IN Expected: May 2025
Department of Earth, Atmospheric, and Planetary Science, PhD in Planetary Science
Thesis: Mars Spiral Polar Troughs

University of Maryland, College Park, MD May 2020
B.S. in Astronomy (High Honors) and Physics GPA : 3.46
Honors Thesis: Exploring Spatial and Temporal Changes in Hydration across the Lunar South Pole

RESEARCH EXPERIENCE

Purdue University, Department of Earth, Atmospheric, and Planetary Science Fall 2020 - Present
PhD
Advisor: Dr. Ali Bramson

Project Title: Mapping Mars' Polar Spiral Trough Migration Paths through Shallow Radar

University of Maryland, Department of Astronomy Fall 2019 - Fall 2020
Academic Honors Thesis
Advisor: Dr. Lori Feaga and Dr. Jessica Sunshine

Project Title: Determining the evolution of water signatures from the Lunar South Pole utilizing Deep Impact HRI-IR

NASA Marshall Space Flight Center Summer 2019
Meteoroid Environment Office (Code EV44)
Advisor: Dr. Althea Moorehead

Project Title: Survey of low speed meteor showers using NASA All Sky Fireball Network

University of Maryland, Department of Astronomy Spring 2018 - Spring 2019
Advisor: Dr. Lori Feaga and Dr. Jessica Sunshine

Project Title: Exploring the morphology of the CO_2 and dust coma of Comet 9P with DCT and Spitzer-IRAC

PAPERS

Laferriere, K., Sunshine, J., Feaga, L., Farnham, T., "Spatial and Temporal Variation of 3 micron hydration feature across the Lunar South Pole", 2020, *in prep.*

POSTERS PRESENTED

Survey of Low speed meteor showers

- NASA Marshall Space Flight Center Poster Expo August 6 2019
- Conference for Undergraduate Women in Astronomy November 1 2019
- Conference for Undergraduate Women in Physics January 17 2020

TALKS PRESENTED

Probing Metallicity of Open Star Clusters Using Beat Cepheids

- University of Maryland, Department of Astronomy, Dr. Suvi Gezari, ASTR498S — Spring 2018

Exploring the Cepheid PM-Relation in M31 with iPFT

- University of Maryland Observatory Open House, Dr. Melissa Hayes-Gehrke, ASTR310 — Fall 2017

TEACHING AND MENTORING EXPERIENCE

Teaching Assistant — Fall 2020
Purdue University, Department of Earth, Athmospheric, and Planetary Science
EAPS111 - Physical Geology 120 (2 Lab sections)

Academic Peer Mentor — Fall 2019
University of Maryland, Department of Astronomy
ASTR120 - The Solar System (Majors course)

Astronomy Peer Mentor (APM Program) — Fall 2018 - Spring 2018
University of Maryland, Department of Astronomy

Residential Counselor — Summer 2018
Upward Bound: Math and Science at Fitchburg State University

OUTREACH

- *Apr 19 2019:* Held Q&A with middle school students from Chapel Hill-Carrboro City Schools NC on STEM at UMD
- *Nov 3 2018:* CMNS Representative at College Fair by Family Development Samaritan Foundation
- *Fall 2018-Present:* Met with 5 of prospective students in Physics and Astronomy
- *Summer 2018* Residential Counselor (TA, Tutor, Mentor) Upward Bound Math and Science and Fitchburg State University
- *Apr 2017-Present:* Panelist for 10 CMNS Open Houses as a CMNS Recruitment Ambassador

SKILLS

Programming: Python, C, IDL, MatLab, LaTeX

Software: Microsoft Office, SAO DS9

Methods: N-Body, Numerical Integration (ex. Euler, RK4), Monte Carlo Integration, Image Calibration, Data Visualization

DECLARATION

I hereby declare that all the details furnished above are true to the best of my knowledge and belief.

Revised 11/24/2019