

Amanda Stricklan, M.S.

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Education

- (Expected) 2024 📖 **Ph.D., New Mexico State University** Astronomy, GPA 3.7
Dissertation: *In-depth Analysis of the Origin and Evolution of Coronal Hole Jets*.
Advisor: Juie Shetye
- 2019 📖 **M.S., University of Georgia** Physics, GPA 3.34
Thesis: *Isolated Molecular Clumps at the CO-boundary of a Diffuse Molecular Cloud*.
Advisor: Loris Magnani
- 2017 📖 **B.S., University of Georgia** Physics and Astronomy, GPA 3.21
Minor: *Archaeological Anthropology*.

Employment History

- 2020-present 📖 **New Mexico State University, Graduate Research Assistant**
Combining space and ground-based observations to study fine scale solar structures and trace them through the solar atmosphere. This research utilizes image alignment and processing of large data sets, spectral and polarimetric analysis, and comparing results with numerical simulations. Also simulations of coronal loops and thermal instability using Athena++.
- 2019-2020 📖 **Los Alamos National Laboratory, Post-Master's Graduate Assistant**
Used high energy particle data from GPS satellites for tracing particle trajectories to study their reaction to Earth's magnetosphere and simulate geomagnetic storms, used machine learning techniques to create a geomagnetic cutoff model.
Department of Energy [Top Secret] Security Clearance, currently inactive.
- 2017-2019 📖 **University of Georgia, Graduate Teaching Assistant**
Ran introduction to Newtonian Mechanics/Electrodynamics/Stellar and Galactic Astronomy Labs – created labs, gave lectures, created and graded final exams, provided mentoring/tutoring outside of lab hours, among highest rated lab instructors in the department, Head TA for astronomy labs 2018-2019

Research Publications and Conferences

Publications

- 1 **A. Stricklan**, "Investigating dynamics of coronal hole jets," Special Research Programs, New Mexico State University, student paper (non-peer-reviewed), 2021.
- 2 **A. Stricklan**, "The search for early fire: A phytolithic study of site fxjj 20 ab," Special Research Programs, Koobi Fora Field School, student paper (non-peer-reviewed), 2021.
- 3 M. Carver, S. K. Morley, and **A. Stricklan**, "Gps constellation energetic particle measurements," in *2020 IEEE Aerospace Conference*, 2020, pp. 1–10. [📄 DOI: 10.1109/AERO47225.2020.9172652](https://doi.org/10.1109/AERO47225.2020.9172652).
- 4 **A. Stricklan**, "Isolated molecular clumps at the co-boundary of a diffuse molecular cloud," M.S. thesis, University of Georgia, 2019.

Conferences

- 1 **A. Stricklan**, “Coronal hole jets: A look at these beasts and what feeds them,” American Astronomical Society Meeting, poster session, 2023.
- 2 S. Morley, Y. Chen, M. Carver, **A. Stricklan**, and M. Engel, “Monitoring and Diagnosing Solar Energetic Particle Events Using the Global Positioning System Constellation,” American Geophysical Meeting, poster session, 2022.
- 3 Amanda Stricklan and Juie Shetye, “Investigating dynamics of coronal hole jets,” American Astronomical Society Conference (poster/oral presentation); National Astronomy Meeting (poster/oral presentation); European Solar Physics Meeting (poster/oral presentation), 2021.
- 4 **A. Stricklan**, “Physical properties of coronal hole jets,” New Mexico State University Special Research Topics, oral presentation, 2021.
- 5 **A. Stricklan**, S. Morley, and M. Carver, “Using gps particle measurements to model geomagnetic cutoff,” American Meteorological Society Conference, poster/oral presentation, 2021.
- 6 **A. Stricklan**, “The search for early fire: A phytolith study of site fxjj 20 ab,” Society of American Archeology, poster presentation, 2019.

Technical Skills

Programming Languages	Python, Fortran, C/C++, IDL, Latex, HTML
Developer Tools	git, VS Code, Bootstrap
Visualization Software	matplotlib, Paraview, Bokeh
Scientific Codes	astropy, sunpy, spacepy, plasmapy, SolarSoft, Athena++, HAZEL, MESA
Hardware/Software	HPC clusters, Windows, iOS, macOS, and Linux, MS Office Suite

Miscellaneous Experience

Awards and Achievements

2023	Los Alamos Vela Graduate Fellowship
	New Mexico Space Grant Consortium Graduate Fellowship
2021	New Mexico State University PhD Tuition Scholarship
2020-2022	New Mexico State University Webber Scholarship
2017-2019	University of Georgia Graduate Fellowship

Workshops

2023	Los Alamos National Laboratory Space Weather Summer School, competitive admission
2022	Inaugural Python in Heliophysics Summer School (PyHC), participant
	Heliophysics Summer School, participant, competitive admission

Outreach

2022-2023	Letters to a pre-Scientist correspondent
	Mission2Mars at the Las Cruces Museum of Nature and Science
2022	Sun Space Art at the Alamogordo Public Library
	Las Cruces Museum of Nature and Science Space Festival
2021-2022	Website Manager, Astronomy Graduate Student Organization, New Mexico State University