

PROFESSIONAL SUMMARY

Astrophysicist with experience in research with planetary atmospheres, space weather, and protoplanetary disks around young stars. As a **Science Policy Advocate**, I have spoken directly with **congressional representatives** and served as a **Student Ambassador** for the **American Physical Society**. In astrophysics I hope to investigate stellar formation and the evolution of near-star environments, and in advocacy I aim to continue to promote science policy at all levels of education and government.

EDUCATION

University of Colorado Boulder <i>B.S. Astrophysical and Planetary Sciences; Minor in Mathematics (In Progress)</i>	Aug. 2026 – Present Boulder, CO
Austin Community College <i>A.S. Physics; A.S. Mathematics</i>	Aug. 2024 – May 2026 Austin, TX

RESEARCH EXPERIENCE

Undergraduate Research Assistant – Planetary Atmospheres <i>University of Colorado Boulder, LASP</i> - Advisors: Dr. Dolon Bhattacharyya, Dr. Kevin France - Performing the first-ever analysis of Near-Ultraviolet (NUV) spectroscopic data from the NASA CUTE (Colorado Ultraviolet Transit Experiment) satellite’s extended mission observations of solar system targets. - Utilizing archival datasets of Jupiter, Mars, Uranus, and Venus to quantify how background atmospheric processes contribute to localized planetary atmospheric escape.	Aug. 2026 – Present Boulder, CO
Boulder Solar Alliance NSF REU Fellow <i>University of Colorado Boulder, LASP</i> - Advisor: Dr. Katelynn Greer - Performed an Observation System Simulation Experiment (OSSE) on <i>in situ</i> observations of Joule Heating in the coupled ionosphere-thermosphere system using Python-based computing tools (NASA CCMC’s Kamodo) to quantify the efficiency of observations with varied orbital parameters and constellation formations.	May 2026 – Aug. 2026 Boulder, CO
Environmental Science Academic Research Co-op <i>Austin Community College</i> - Advisor: Dr. Jenny Cooke - Investigated recent landslide structures in Austin, Texas utilizing Ground Penetrating Radar to determine geological consequences and potential risk for the surrounding area, advising future city developments. - Conducted a field survey of soil samples taken from growing farms. Measured carbon respiration as a proxy to carbon sequestration to quantify the efficiency of sequestering rates in varied agricultural methods.	Mar. 2026 – May 2026 Austin, TX
Student Researcher – Protoplanetary Disk Evolution <i>Texas State University</i> - Advisor: Dr. Andrea Banzatti - Investigated the chemical evolution of water in protoplanetary disks surrounding young stars through spectroscopy, primarily using JWST and iSHELL telescope data, supplemented by archival Herschel Space Observatory observations. - Participated in 12 observations over 2 cycles with the NASA IRTF iSHELL spectrograph instrument, including remote operation of the telescope.	Aug. 2025 – May 2026 San Marcos, TX

OBSERVING EXPERIENCE

Facility	Instrument / Details	
NASA IRTF (3.2m)	iSHELL (1.1 – 5.3 μm), 3 nights	Mar. 2026
	iSHELL (1.1 – 5.3 μm), 9 nights	Dec. 2025 – Jan. 2026

ACKNOWLEDGMENTS & CONTRIBUTIONS

Protoplanetary disk cavities with JWST-MIRI: a dichotomy in molecular emission

P. Mallaney, A. Banzatti, et al. 2026

2026ApJ...998..255M

- Verified the accuracy of stated stellar age and mass calculations, and recalculated discovered errors, in **Table 1**.

CONFERENCE PRESENTATIONS

- **J. Sendgikoski** and K. Greer, (Accepted) “Resolving Multi-Scale Plasma-Neutral Friction with VLEO Constellations”, Oral and Poster presentation at the *Undergraduate Physics Conference of Colorado*, Boulder, CO, September 2026.
- **J. Sendgikoski** and K. Greer, “An Evaluation of VLEO Constellation Architectures for in situ Joule Heating Observations”, Oral and Poster presentations at the *Boulder Solar Alliance REU Symposium*, Boulder, CO, July 2026.

GRANTS & AWARDS – \$20,700 TOTAL

Boulder Solar Alliance NSF REU Conference Travel Award \$4300 USD	July 2026
Boulder Solar Alliance NSF REU Fellowship Stipend \$8400 USD	May 2026 – Aug. 2026
Student Travel Award - 2026 Global Physics Conference \$2400 USD	Mar. 2026
Annual Leadership Meeting and Congressional Visits Travel Grant \$1700 USD	Feb. 2026
Students for the Exploration and Development of Space Project Grant \$900 USD	Oct. 2025
Phi Theta Kappa Honors In Action Grant \$600 USD	June 2025
Student Travel Award - 2025 Global Physics Conference \$2300 USD	Mar. 2025

PROFESSIONAL DEVELOPMENT

REU Professional Development	May 2026 – Aug. 2026
<i>Boulder Solar Alliance NSF REU, LASP</i>	<i>Boulder, CO</i>

- Participated in graduate school panels, career panels, and science policy panels alongside REU cohort.
- Completed timed mock presentations to the cohort in preparation for the end-of-program research symposium.

APS Annual Leadership Meeting and Congressional Visits Day	Feb. 2026
<i>American Physical Society (APS)</i>	<i>Washington DC.</i>

- **Congressional Visits:** Selected to represent APS as a student ambassador to advocate for science policy directly to congressional representatives. Advocacy done through private meetings with a focus on protecting science policy and funding.
- Attended the Annual Leadership Meeting as an APS Student Ambassador, where I participated in week-long workshops over science communication and advocacy strategies alongside scientific leaders.

NASA Community College Aerospace Scholars (NCAS)	Jan. 2025 – Apr. 2025
<i>NCAS Scholar Alumni; Project Manager</i>	<i>Remote</i>

- **Project Manager:** Coordinated a project from concept to proposal for a 14-student team from across the country. Drafted a detailed mission schedule and created a research proposal presented to NASA scientists.
- **Mission 1:** Studied in a competitive 5-week course with a capstone project showcasing the engineering and concept behind the Parker Solar Probe.
- **Mission 2:** Participated in a mission simulation of the NASA project pipeline in a small team of students. Achieved mission objectives while integrating NASA science goals.

TEACHING EXPERIENCE

Supplemental Instruction Leader	Jan. 2026 – May 2026
<i>Austin Community College</i>	<i>Austin, TX</i>

- Designed and implemented engaging session plans reflective of both course material and student interest, and collaborated closely with the course instructor to develop strategies for the development of study material.

PROJECTS

Muon Detector <i>Fusion360, Python</i>	Oct. 2025 – May 2026
• Advisor: Dr. Howard Matis • Constructed a SPiM muon particle telescope as an independent project. The instrument measures muon concentrations and rates of decay within the scintillator as part of an educational initiative for particle physics.	
ACC SEDS Competition Rocketry Team <i>BambuLabs, OnShape, Python</i>	Aug. 2024 – Jan. 2026
• Project Engineer: Managed a team of 14 engineering students in building a competition sounding rocket for the 2025 Intercollegiate Rocketry Engineering Competition (IREC), and placed 11th out of the 63 teams in our category as the first community college to ever compete.	

PUBLIC OUTREACH

Student Ambassador	Apr. 2025 – Apr. 2027
<i>American Physical Society (APS)</i>	<i>Remote</i>
• Represented APS at the Annual Leadership Meeting in Washington DC for advocacy and leadership training, and on Capital Hill for science policy advocacy. • Represented APS at Austin Community College and the University of Colorado Boulder to promote membership and inclusion to students through class tours, seminars, and tabling events. • Hired as the first community college Student Ambassador in APS to the 2025 to 2026 cohort. Rehired after the first term for the 2026 to 2027 cohort.	
Scientific Outreach and Volunteering	June 2026 – Present
• Astronomy on Tap: Volunteered in public science communication events in Austin, Texas and Boulder, Colorado as part of a broader astronomy educational program. Assisted in setting up events and sourcing speakers to present to large audiences. • Astronomy Club Presentations: Prepared and delivered educational talks to wide audiences at Austin Community College's Astronomy club covering wide ranges of astronomy topics, from the Star Life Cycle to Protoplanetary Disk research. • K-12 School Visits: Led and supported multiple science outreach events at local elementary and middle schools to promote STEM engagement and inspire the next generation of scientists. • Science Visit Day at ACC: Supported Austin Community College's annual Science Visit Day speaking to middle school students about astronomy, physics, chemistry, and engineering. • Contemporary Physics Education Project (CPEP): Developed educational physics media on Black Hole Merger events and Gravitational Wave history that was shared on all CPEP media and store pages.	

PROFESSIONAL MEMBERSHIP

American Meteorological Society (AMS)	June 2026 – Present
American Geophysical Union (AGU)	June 2026 – Present
American Physical Society (APS)	Nov. 2024 – Present

TECHNICAL SKILLS

Programming Languages: Python (Astropy, NumPy, Pandas, SciPy, Xarray), Javascript
Web Development: HTML, CSS, SVG
Developer Tools: Git, GitHub, LaTeX
Software & Tools: Interactive Spectral-Line Analysis Tool (iSLAT), NASA CCMC Kamodo, Ysoisochrone
Instrument Operation: Ground Penetrating Radar (GPR), NASA IRTF iSHELL Spectrograph
CAD Software: AutoCAD, Fusion360, NX, OnShape