Alvin Angeles

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Education

Ph.D. Physics and Space Science **August 2022 - May 2027**
University of New Hampshire (UNH) Department of Physics & Astronomy, Durham, NH
- PhD Advisor: Harlan Spence

B.A. Astronomy and Astrophysics **May 2021**
University of Colorado Boulder Department of Astrophysical & Planetary Science, Boulder, CO
- Minor in Space

Publications

In Preparation:

Catherine E. Regan, Silvia Ferro, Austin Matheus Smith, **Alvin J. G. Angeles**, Solar Wind Classifications at Mars using Machine Learning Techniques. *Solar Physics.*

Published:

Alvin J. G. Angeles, Harlan E. Spence, Charles W. Smith, Bernard J. Vasquez, Ian J. Cohen, Kevin J. Genestreti, Ruth Skoug, Savvas Raptis, Christine Gabrielse, Daniel J. Gershman, David Fischer, Christopher T. Russell, James L. Burch, Roy B. Torbert, Werner Magnes, The Correlation Function for Magnetic Field Fluctuations at Ion Dissipation Scales in the Solar Wind. *Journal of Geophysical Research: Space Physics.* https://doi.org/10.1029/2025JA034569

Sarah A. Kovac, Amir Caspi, Daniel B. Seaton, … **Alvin J. G. Angeles**, … & Zakelj, J.A. Citizen CATE 2024: Extending Totality During the 8 April 2024 Total Solar Eclipse with a Distributed Network of Community Participants. *Solar Physics.* https://doi.org/10.1007/s11207-025-02588-9

Professional Experience

Graduate Research Assistant **August 2022 - Present**
University of New Hampshire Department of Physics & Astronomy Space Science Center, Durham NH
- Conducting research focused on characterizing the behavior of solar wind turbulence at small scales at the dynamics that drive them.
- Performs data analysis on large datasets from the NASA Magnetospheric Multiscale Mission.

Solar Physics Student Research Assistant **August 2019 - August 2021**
Colorado Space Grant Consortium, Boulder CO
- Science Team co-lead for the Student Thermal Energetic Activity Module (STEAM) student payload on the SouthWest Research Institute NASA Small Explorer PUNCH spacecraft mission.
- Conducted background research, preliminary analysis, and calculations for possible solar flares and background radiation that the mission would encounter.

Undergraduate Research Assistant **January 2020 - May 2020**
ASTR 3400: Research Methods in Astronomy, Boulder CO
- Analyzed data for the Research and Education Collaborative Occultation Network in its search for Trans-Neptunian Objects.

Student Demosat Team Member **February 2019 - May 2019**
Colorado Space Grant Consortium, Boulder CO

- Proposed, designed, built, tested, and flew balloon cubesat payload. Analyzed data post flight in mission summary report.

Scientific Service & Professional Development

AGU Space Physics and Aeronomy Student Advisory Committee Chair **January 2026 - Present**
American Geophysical Union, Washington D.C.

SciX Heliophysics Lead Ambassador 2025-2027 Cohort **March 2025 - Present**
Science Explorer (SciX), Cambridge MA

NASA's Living With A Star Heliophysics Summer School 2025 **August 12, 2025 - August 20, 2025**
University Cooperative for Atmospheric Research, Boulder CO

AGU SPA Student Advisory Committee Co-Chair **March 2025 - December 2025**
American Geophysical Union, Washington D.C.

NASA Review Panel Executive Secretary **August 19, 2024 - August 23, 2024**
National Aeronautics and Space Administration HQ Heliophysics SMD, Washington D.C.

Citizen CATE Next-Generation Experiment Team Member Site 32 **February 2024 - April 2024**
Southwest Research Institute, Boulder CO

Science Museum Volunteer **October 2020 - February 2022**
Denver Museum of Nature and Science, Denver CO

University of Colorado Boulder Space Minor Lead Ambassador **September 2018 - May 2020**
University of Colorado, Boulder, Boulder CO

Invited Seminars

Magnetospheric Multiscale Mission (MMS) Team Meeting **October 14, 2025**
Southwest Research Institute, San Antonio TX

- Title: *The Correlation Function for Magnetic Field Fluctuations at Ion Dissipation Scale in the Solar Wind.*

University of New Hampshire EOS Space Science Seminar Series **November 13, 2023**
University of New Hampshire Institute of Earth, Oceans and Space, Durham NH

- Title: *Investigating Magnetic Fluctuations at Dissipation Scales in the Solar Wind.*

Workshop Oral Presentations

HelioSwarm Science Team Meeting 2023 **December 10, 2023**
University of New Hampshire Department of Physics & Astronomy, Durham NH

Southwest Research Institute PUNCH Winter Science Meeting **December 3, 2020**
Colorado Space Grant Consortium, Boulder CO

Southwest Research Institute PUNCH Summer Science Workshop **June 3, 2020**
Colorado Space Grant Consortium, Boulder CO

Conference & Workshop Poster Presentations

AGU 25 Annual Meeting: MultiScale Processes in Planetary, Space, and Astrophysics: Turbulence, Magnetic Reconnection, and Shocks II **December 15, 2025**
University of New Hampshire Department of Physics & Astronomy Space Science Center, Durham NH

- Title: *Characterizing Dissipation Scale Solar Wind Turbulence at 1 AU Using Correlation Functions.*

UCAR Heliophysics Summer School **August 2025**
University Cooperation for Atmospheric Research, Boulder CO

- Title: *Investigating Anisotropies in Small-Scale Solar Wind Turbulence at 1 AU*

AGU 24 Annual Meeting: Multiscale Dynamics in Magnetized Turbulence I **December 11, 2024**
University of New Hampshire Department of Physics & Astronomy Space Science Center, Durham NH

- Title: *Correlation Function Analysis for Magnetic Field Fluctuations at Dissipation Scales in the Pristine Solar Wind.*

American Geophysical Union Fall 2023 Meeting: Energy Transfer and Dissipation in Space Plasmas: Kinetic to Global Scales **December 12, 2023**
University of New Hampshire Department of Physics & Astronomy Space Science Center, Durham NH

- Title: *Investigating the Behavior of Solar Wind Turbulence at the Electron Scale.*

American Geophysical Union Fall 2020 Meeting: High Energy Solar Investigations Through Next-Generation Remote Sensing Session **December 16, 2020**
Colorado Space Grant Consortium, Boulder CO

- Title: *The Student Thermal Activity Module (STEAM) X-ray Spectrometer for Solar Flares and Active Regions*

NASA Student Project Internal Preliminary Design Review **December 14, 2020**
Colorado Space Grant Consortium, Boulder CO

Southwest Research Institute PUNCH Winter Science Meeting **December 3, 2020**
Colorado Space Grant Consortium, Boulder CO

American Astronomical Society 51st Solar Physics Division **August 18, 2020**
Colorado Space Grant Consortium, Boulder CO

- Title: *The Student Thermal Activity Module (STEAM) X-ray Spectrometer for Solar Flares and Active Regions*

Teaching Experience

Space Foundation Space Education Specialist **October 2021 - May 2022**
The Space Foundation, Colorado Springs CO

CU Mentor Collective Peer Mentor **June 2020 - May 2021**
University of Colorado, Boulder, College of Arts and Sciences, Boulder CO

Undergraduate Teaching Assistant **January 2019 - May 2020**
University of Colorado, Boulder, Department of Aerospace Engineering Sciences, Boulder CO

ExtraCurriculars

UNH Run Club Founding Member **October 2024 - Present**
University of New Hampshire, Durham NH

UNH Archery Club Member **September 2024 - Present**
University of New Hampshire, Durham NH

UNH Eco-Reps Member **September 2024 - Present**
University of New Hampshire, Durham NH

Student Orientation Leader **May 2019 - May 2021**
University of Colorado, Boulder, New Student & Family Programs, Boulder CO

Awards

Colorado Space Grant Consortium Space Grant Scholar **September 9, 2021**
Colorado Space Grant Consortium, Boulder CO

Languages and Skills

English (native), Python, pySPEDAS, Latex, IDL, Matlab