

Samantha M. Turbeville

Ph.D. Candidate • Department of Atmospheric Sciences, University of Washington

✉ smturbeville@gmail.com • ☎ (808)269-8303 • 🌐 [smturbev](https://www.smturbev.com)

Education

Ph.D., Atmospheric Sciences with a Data Science focus University of Washington Seattle, WA Advisors: Thomas Ackerman and Chris Bretherton	Expected Aug 2024
M.S., Atmospheric Sciences University of Washington Seattle, WA Advisors: Thomas Ackerman and Chris Bretherton	Jun 2021
B.A., Mathematical Sciences with minors in Physics and Art Colby College Waterville, ME	May 2018

Research Projects

- **Quantify model biases from ice cloud microphysics** 2023 – Present
Using a small domain doubly-period simple cloud resolving E3SM atmosphere model (SCREAM) with P3 microphysics to quantify the sensitivity of modeled clouds to ice sedimentation, vapor deposition, large scale ascent, and changing SSTs.
- **Tropical convection and tropopause layer cirrus in global storm-resolving models** 2022 – Present
Tropical analysis of convection and cirrus clouds in models that participated in the second phase of the DYAMOND project. Regional comparison of models that participated in both phases of DYAMOND.
- **Model intercomparison of global storm-resolving models** 2019 – 2022
Diagnosing model biases in regions of active tropical convection by analyzing of top of atmosphere radiative fluxes and vertical cloud structure in models that participated in the first phase of DYAMOND.
Publications:
 - **Turbeville**, S. M., Nugent, J. M., Ackerman, T. P., Bretherton, C. S., & Blossey, P. N. (2022). Tropical cirrus in global storm-resolving models: 2. Cirrus life cycle and top-of-atmosphere radiative fluxes. *Earth and Space Science*, 9, e2021EA001978. DOI: [10.1029/2021EA001978](https://doi.org/10.1029/2021EA001978)
 - Nugent, J. M., **Turbeville**, S. M., Bretherton, C. S., Blossey, P. N., & Ackerman, T. P. (2022). Tropical cirrus in global storm-resolving models: 1. Role of deep convection. *Earth and Space Science*, 9, e2021EA001965. DOI: [10.1029/2021EA001965](https://doi.org/10.1029/2021EA001965)

Fellowships & Awards

AMS Annual Meeting 2024 Student Poster Presentation Award	2024
ARCS Foundation Fellow, University of Washington	2018 – 2021
GSEE formerly GO-MAP Fellow, University of Washington	2018 – 2020
Sigma Pi Sigma, Colby College	2018
Ralph Bunche Scholar, Colby College	2014 – 2018

Service

Mentorship | Department of Atmospheric Sciences, University of Washington

- Graduate Peer Mentorship Group 2022 – Present
- Graduate-Undergraduate Mentorship Program Mentor 2019 – 2021
- Summer Intern Mentor 2020

Student member | AMS Cloud Physics Committee [2022 – 2024](#)

- Helped organize and co-lead a session at AMS Cloud Physics conference [2023](#)

Student leader | NSF-PIRE Cirrus Journal Club [2020 – 2024](#)

- Helped organize annual meetings and monthly seminars for early career scientists and students
- Hosted a seminar speaker at University of Washington [Sep 2023](#)

Student organizer | Department of Atmospheric Sciences, University of Washington

- Department intramural coordinator [2019 – 2023](#)
- Python club organizer [2019 – 2022](#)

Teaching Experience

Teaching Assistant | Department of Atmospheric Sciences, University of Washington

- Global Warming (100-level class) [2020 & 2024](#)

Teaching Assistant | Department of Mathematics, Colby College

- Mathematical Reasoning (200-level class) [2016 – 2017](#)
- Ordinary Differential Equations (300-level class) [2017 – 2018](#)

Conferences

Talks & presentations:

- AMS Annual Meeting [2024](#)
- PIRE Cirrus Annual Workshop [2018](#), [2019](#), [2020](#), [2021](#), [2023](#)
- Cloud Feedback Model Intercomparison Project (CFMIP) [2023](#)
- AMS Collective Madison Meeting – Clouds Physics [2022](#)
- Pan-GASS Meeting [2022](#)
- University of Washington seminar [2021](#) (MS defense)