Evanna Chevalier

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Education

Ph.D. Atmospheric Science   Expected 2030
North Carolina State University
Advisor: Dr. Sarah Larson

B.S. (Honors) Atmospheric and Oceanic Science   Summer 2025
B.S. Data Science
University of Wisconsin-Madison
Environmental Studies Certificate

Professional Experience

North Carolina State University, Marine, Earth, and Atmospheric Sciences Department
Graduate Research Assistant, August 2025-present
Advisors: Dr. Sarah Larson
Research focuses on overlap between tropical climate variability, atmosphere-ocean interactions, and climate prediction. I will be using CESM2 and observations to better understand ENSO and stratocumulus clouds in the subtropics to improve model predictions.

University of Wisconsin-Madison, Atmospheric and Oceanic Sciences Department
Undergraduate Student Researcher, September 2023 – August 2025
Advisors: Dr. Hannah Zanowski
Designed and ran simulations using ROCKE-3D to analyze how varying planetary parameters (rotation rate, radius, orbital period, eccentricity, stellar flux) impact the partitioning of atmospheric and oceanic heat transport. Analyzed model output, built code to calculate atmospheric heat transport, visualized data.

Colorado State University, Department of Atmospheric Science
Atmospheric Science Research Intern, June 2024 – August 2024
Advisors: Charlotte Connolly, Daniel Hueholt, Dr. Elizabeth A. Barnes
Investigated how different Stratospheric Aerosol Injection (SAI) scenarios impact climate systems after a 2-year period of sustained injection. Explored the relationship between temperature and injection location/rate. Decided and led what variables were investigated. Navigated missing data challenges.

University of Wisconsin-Madison, Department of Geoscience
Field Assistant, July 2023 – August 2023
Advisors: Ellen M. Nelson, Deanna A. Flores

Provided support to lead researchers on their graduate projects. Completed field work to measure fabrics and foliations in metamorphic rocks near Montreal, Canada. Measured magnetic field and drilled cores of igneous rocks to better understand the Laramide Orogeny.

Conference Presentations

Understanding the Partitioning of Atmospheric and Oceanic Heat Transport in Response to Varying Planetary Parameters (Evanna Chevalier, Hannah Zanowski):

- Poster presentation at the 27th Annual UW-Madison Undergraduate Symposium

Investigating the Short-Term Climate Responses to Stratospheric Aerosol Injection (Evanna Chevalier, Charlotte Connolly, Daniel Hueholt, Elizabeth A. Barnes)

- Oral presentation at CSU Student Research Symposium
- Poster presented at CSU Student Research Poster Session

Investigating the Short-Term Climate Responses to Stratospheric Aerosol Injection (Evanna Chevalier, Charlotte Connolly, Daniel Hueholt, Elizabeth A. Barnes):

- Oral presentation at 105th AMS Annual Meeting (17th Symposium on Aerosol Cloud Climate Interactions)
- Poster presented at 105th AMS Annual Meeting (24th Annual Student Conference)

Computational/Programming Experience

Python:

     Data analysis packages including Numpy, pandas, xarray, netcdf, Metpy, scipy, pyarrow

     Data visualization packages including matplotlib and seaborn

     Experience with Docker for containers

     Distributed data processing with Spark

     Large scale data storage and processing using HDFS

R:

     Data analysis and visualization

     Statistical analysis

     RStudio

SQL:

     Data querying

     MySQL for queries, creating tables, establishing relationships

Google Cloud Processing

Github/Gitlab

Jupyter

High-performance computing systems including university clusters

Relevant Coursework

2023	CS 220 Data Science Programming 1
2024	CS 320 Data Science Programming 2
2024	STAT 240 Data Science Modeling 1
2024	STAT 340 Data Science Modeling 2
2024	CS 544 Intro to Big Data Systems
2024	LIS 464 Applied Database Design
2025	STAT 436 Statistical Data Visualization
2025	STAT 451 Introduction to Machine Learning and Statistical Pattern Classification
2025	ATMOCN 575 Climatological Analysis

Climate Modeling

Experience analyzing CESM2 output

Experience analyzing output, running, and altering rundecks for ROCKE-3D

Awards and Honors

2025 UW-Madison AOS Warren Sunkel Scholarship Award

2025 Outstanding Student Presentation Award at 105th AMS Annual Meeting

UW-Madison's Dean List: Spring 2022, Spring 2024, Fall 2025, Spring 2025

Extracurriculars

American Meteorological Society UW-Madison Chapter

Professional Affiliations

American Meteorological Society