Chloe L. Boehm

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EDUCATION

Colorado State University, Fort Collins, CO, USA 2022-2025
Ph.D., Atmospheric Science
Dissertation: Two-Way Interactions Between Antarctic Sea Ice and the Atmospheric Circulation: Mechanisms for and Implications of Recent Sea-Ice Loss
Advisor: David W.J. Thompson

Colorado State University, Fort Collins, CO, USA 2019-2022
M.S., Atmospheric Science
Thesis: The Contribution of Clouds to Global Surface Temperature Variability on Monthly to Decadal Timescales
Advisor: David W.J. Thompson

Colby College, Waterville ME, USA 2014-2018
B.A, *cum laude*, Double Major: Physics and Mathematical Sciences, Minor: Computer Science

University of Otago, Dunedin, New Zealand Spring 2017

RESEARCH EXPERIENCE

Alfred Wegener Institute, Bremerhaven, Germany February 2026-present
Postdoctoral Researcher, Helmholtz Investigator Group 'Southern Ocean & Antarctic Sea Ice Evolution'
Supervisor: Lettie Roach

World Climate Research Programme 2024-present
Explaining and Predicting Earth System Change (EPESC)
Working Group 2: Integrated Attribution, Prediction and Projection

Colorado State University, Fort Collins, CO, USA 2019-2025
Graduate Research Assistant
Advisor: David W.J. Thompson

University of Bergen, Bergen, Norway September 2022
Visiting Researcher
Supervisor: Shengping He

Mount Washington Observatory, North Conway, NH, USA 2018-2019
Summit Internship, Researching novel methods for snow depth measurement

Colby College Physics Department, Waterville, ME, USA 2017-2018
Senior Research Project, "Analyzing Model Predictions for Climate Change"

AWARDS

American Geophysical Union Travel Grant 2024
Colorado State University Graduate Student Council

Outstanding Physics Learning Assistant 2018
American Association of Physics Teachers

Sigma Pi Sigma 2018
Physics Honor Society

Distinction in Major 2018
Physics and Mathematical Sciences, Colby College

TEACHING EXPERIENCE

Colorado State University, Fort Collins, CO, USA Spring 2020
Graduate Teaching Assistant, ATS606 *Introduction to Climate*

Colby College, Waterville, ME, USA 2017-2018
Teaching Assistant, PH141 *Foundations of Mechanics*
Teaching Assistant, PH145 *Foundations of Electromagnetism and Optics*

PUBLICATIONS

Boehm, C.L., D.W.J. Thompson, and E. Blanchard-Wrigglesworth, 2025: The key role of the Southern Annular Mode during the sea-ice maximum for Antarctic sea ice and its recent loss. *Commun Earth Environ,* **6**, 833, https://doi.org/10.1038/s43247-025-02792-2.

Boehm, C.L., and D.W.J. Thompson, 2023: The Key Role of Cloud–Climate Coupling in Extratropical Sea Surface Temperature Variability. *J. Climate*, **36**, 2753–2762, https://doi.org/10.1175/JCLI-D-22-0362.1.

SELECTED PRESENTATIONS

Boehm, C.L., Thompson, D.W.J., and E. Blanchard-Wrigglesworth, **Invited Oral Presentation** Sep. 2025. "The Key Role of the Southern Annular Mode during the Sea-Ice Maximum for Antarctic Sea Ice and its Recent Loss." Scientific Committee on Antarctic Research, AntClimNow (Near-term Variability and Prediction of the Antarctic Climate System) Monthly Science Talks

Boehm, C.L., Thompson, D.W.J., and E. Blanchard-Wrigglesworth, Oral Presentation Jun. 2025. "Exploring the Local Atmospheric Response to Antarctic Sea Ice Loss." 30th Annual CESM Workshop 2025

Boehm, C.L., Thompson, D.W.J., and E. Blanchard-Wrigglesworth, Oral Presentation Apr. 2025. "The Key Role of the Southern Annular Mode During the Seasonal Sea Ice Maximum in Recent Antarctic Sea Ice Loss." European Geosciences Union General Assembly 2025

Boehm, C.L., Thompson, D.W.J., and E. Blanchard-Wrigglesworth, **Invited Oral Presentation** Mar. 2025. "Interpretation of Recent Antarctic Sea Ice Loss: The Key Role of Atmospheric Circulation During the Seasonal Sea Ice Maximum." NCAR Climate and Global Dynamics Laboratory, Climate Analysis Section Group Meeting

Boehm, C.L., Thompson, D.W.J., and E. Blanchard-Wrigglesworth, Oral Presentation Mar. 2025. "Interpretation of Recent Antarctic Sea Ice Loss: The Key Role of Atmospheric Circulation During the Seasonal Sea Ice Maximum." CESM Polar Climate Working Group Meeting

Boehm, C.L., Thompson, D.W.J., and E. Blanchard-Wrigglesworth, Oral Presentation Dec. 2024. "Interpretation of Recent Southern Hemisphere Sea Ice Loss: The Key Role of Atmospheric Circulation During the Seasonal Sea Ice Maximum." American Geophysical Union Annual Meeting 2024

Boehm, C.L., and D.W.J. Thompson, Oral Presentation Oct. 2024. "The Key Role of Atmospheric Circulation for Recent Southern Hemisphere Sea Ice Loss." Young Scientist Symposium on Atmospheric Research

Boehm, C.L., and D.W.J. Thompson, Oral Presentation Oct. 2024. "How might sea ice loss in Antarctica influence the atmospheric circulation?" Colorado State University Climate Supergroup Seminar

Boehm, C.L., and D.W.J. Thompson, Oral Presentation June. 2024. "Interpretation of Recent Southern Hemisphere Sea Ice Loss: The Key Role of Atmospheric Circulation During the Seasonal Sea Ice Maximum." 24th Conference on Atmospheric and Oceanic Fluid Dynamics.

Boehm, C.L., and D.W.J. Thompson, Oral Presentation Jan. 2023. "The Signature of Cloud Radiative Effects in Extratropical Sea Surface Temperature Variability." American Meteorological Society 103rd Annual Meeting

Boehm, C.L., and D.W.J. Thompson, Oral Presentation Sep. 2022. "The Signature of Cloud Radiative Effects in Extratropical Sea Surface Temperature Variability." University of Bergen Stormtracks Group Meeting

Boehm, C.L., and D.W.J. Thompson, Poster May. 2022. "The Contribution of Clouds to Northern Hemisphere Surface Temperature Variability on Monthly to Decadal Timescales." Stormtracks 2022: Midlatitude Storm-tracks Workshop

SERVICE AND LEADERSHIP

Mentor 2023-2024
Cooperative Institute for Research in the Atmosphere/Department of Atmospheric Science Mentoring Program

Volunteer 2022-2024
Little Shop of Physics

Planning Committee Co-chair 2021-2023
Young Scientist Symposium on Atmospheric Research

Co-founder, Member of Steering Committee 2016-2018
Women in Physics Club at Colby College, Funded by the American Physical Society's Women in Physics Group Grant

PROFESSIONAL DEVELOPMENT

Polar Amplification Model Intercomparison Phase 2 (PAMIP2) Workshop Oct. 2024

Polar Amplification of Climate Change Across Hemispheres and Seasons Causes and Constraints Workshop Jan. 2024

SKILLS

Computational Languages: Python, MATLAB, LaTeX, Unix, Git, Microsoft Office