Adam B. Sokol

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EDUCATION

University of Washington

Ph.D., Atmospheric Science (Data Science Option), Advisor: Dennis L. Hartmann — June 2024

M.S., Atmospheric Science — Dec 2020

B.S., Yale University — 2013-2017

Magna cum laude. Majors: Environmental Engineering, Geology & Natural Resources. Advisor: Trude Storelvmo

RESEARCH EXPERIENCE

Postdoctoral Research Associate, Princeton University — Sep 2024-

Interim Postdoctoral Scholar, University of Washington — June 2024 - Sep 2024

NASA FINESST Graduate Fellow, University of Washington — Sep 2020 – Aug 2023

Graduate Research Assistant, University of Washington — Sep 2018 - June 2024

Research Assistant, University of Oslo — Mar 2018 - June 2018

REU Research Assistant, Penn State University — June 2016 - Aug 2016

AWARDS, HONORS, & FELLOWSHIPS

NASA FINESST Graduate Fellowship — 2020-2023

Outstanding Student Presentation Award (OSPA), AGU Fall Meeting — 2020, 2023

Advanced Climate Dynamics Course, Summer School Participant (Univ. of Bergen) — 2022

Joost A. Businger Fellowship in Atmospheric Sciences (Univ. of Washington) — 2018

Pat Wilde Prize for excellence in Geology & Geophysics (Yale) — 2017

Hammer Prize for outstanding senior thesis in Geology & Geophysics (Yale) — 2017

Environmental Engineering Prize for outstanding scholarship (Yale) — 2017

Tau Beta Pi, the National Engineering Honors Society — 2016

Von Damm Research Fellowship (Yale) — 2015, 2016

Environmental Research Fellowship (Yale) — 2015

Saybrook College Research Fellowship (Yale) — 2015

PEER-REVIEWED PUBLICATIONS

Sokol, A.B., V.A. Munteanu, P.N. Blossey, and D.L. Hartmann (2024). Internal ocean-atmosphere variability in kilometer-scale radiative-convective equilibrium. In review for *J. Adv. Model. Earth Sys.*

Sokol, A.B., C.J. Wall, and D.L. Hartmann (2024). Anvil cloud thinning implies higher climate sensitivity. *Nature Geoscience, 17*(5), 398-403. doi:10.1038/s41561-024-01420-6

Sokol, A.B. and T. Storelvmo (2024). The spatial heterogeneity of cloud phase observed by satellite. *J. Geophys. Res.-Atmos., 129,* e2023JD039751. doi:10.1029/2023JD039751.

Atlas, R.L., C.S. Bretherton, **A.B. Sokol,** P.N. Blossey, and M.F. Khairoutdinov (2024). Tropical cirrus are highly sensitive to ice microphysics within a nudged global storm-resolving model. *Geophys. Res. Lett., 51(1),* e2023GL105868. doi:10.1029/2023GL105868

Gasparini, B., S.C. Sullivan, S.C., **A.B. Sokol,** B. Kärcher, E. Jensen, & D.L. Hartmann (2023). Opinion: Tropical cirrus—from micro-scale processes to climate-scale impacts. *Atmos. Chem. Phys., 23(24),* 15413-15444*.* doi:10.5194/egusphere-2023-1214.

Lamraoui, F., M. Krämer, A. Afchine**, A.B. Sokol,** S. Khaykin, A. Pandey, and Z. Kuang (2023). Sensitivity of convectively driven tropical tropopause cirrus to ice habit. *Atmos. Chem. Phys., 23*(4), 2393-2419*.* doi:10.5194/acp-2022-670.

Sokol, A.B. and D. L. Hartmann (2022). Congestus mode invigoration by convective aggregation in simulations of radiative-convective equilibrium. *J. Adv. Model. Earth Sys., 14*(7). doi:10.1029/2022MS003045.

Hartmann, D.L., B.D. Dygert, P.N. Blossey, Q. Fu, and **A. B. Sokol** (2022). The vertical profile of radiative cooling and lapse rate in a warming climate. *J. Climate, 35*(19), 2653-2665. doi:10.1175/JCLI-D-21-0861.1

Sokol, A.B. and D.L. Hartmann (2022). Radiative Cooling, Latent Heating, and Cloud Ice in the Tropical Upper Troposphere. *J. Climate, 35*(5), 1643-1654. doi:10.1175/JCLI-D-21-0444.1.

Gasparini, B., **A.B. Sokol,** C.J. Wall, D.L. Hartmann, and P.N. Blossey (2022). Diurnal differences in tropical anvil cloud evolution. *J. Climate, 35*(5), 1655-1677. doi:10.1175/JCLI-D-21-0211.1.

Sokol, A.B. and D.L. Hartmann (2020). Tropical anvil clouds: radiative driving towards a preferred State, *J. Geophys. Res.—Atmos.*, *125*(21), e2020JD033107. doi:10.1029/2020JD033107.

OTHER WORKS

Sokol, A.B. (2020). "What makes the wind?". *The Conversation's* Curious Kids series. Link.

TEACHING

University of Washington, Department of Atmospheric Sciences

Lab instructor, TA, Atmospheric Motions II (undergrad GFD) — Winter 2023
Professor: David Battisti

Guest Lecturer, Exploring the Atmospheric Sciences — Winter 2023

Instructor, Exploring the Atmospheric Sciences — Spring 2022

Co-Instructor/Co-Facilitator, UW Atmos. Diversity, Equity, & Inclusion Seminar — Fall 2021

Teaching Assistant, Global Warming: Understanding the Issues — Spring 2020
Professor: Kat Huybers

MENTORSHIP

Primary Research Advisor for UW undergraduate (Vlad Munteanu) — Fall 2022-present

UW Atmos. Sci. Graduate Student Peer Mentoring Program — Fall 2022-present

UW Atmos. Sci. Graduate-Undergraduate Mentoring Program — Fall 2018-present
Mentor for 4 undergraduate students (some for several years)

SERVICE ACTIVITIES

Clouds & Convection Reading Group (coordinator)**,** UW Atmos. Sci. — Summer 2023-present

Black History Month Reading Group (coordinator)**,** UW Atmos. Sci. 2021-2022

Graduate Student Representative, UW Atmos. Sci. 2019-2021

Graduate Student Steering Committee, UW Program on Climate Change 2019-2021

Guest Lecturer & Outreach Project Lead, Sammamish HS, Sammamish, WA 2019-2021
Coordinated outreach project for 3 yrs. Taught classes at Sammamish HS, served as expert resource for class projects on climate change, hosted student presentations on UW campus

Peer Reviewer
Journal of Climate, Journal of Geophysical Research-Atmospheres, Atmospheric Chemistry & Physics, Journal of Advancement in Modeling Earth Systems, Climate Dynamics

INVITED TALKS & SEMINARS

Pre-EGU Workshop on Ice Clouds, University of Vienna 2024
Oregon State University, Physical Oceanography & Atmos. Sciences Seminar 2024
ECS & Cloud Feedback Virtual Symposium 2024
Princeton University/GFDL, AOS Atmospheric Dynamics Seminar 2023
University of Washington Atmospheric Sciences, Climate Dynamics Seminar 2023
NSF PIRE-Cirrus Virtual Seminar Series 2023
NSF-PIRE Cirrus Virtual Seminar Series 2021
AGU Fall Meeting (invited eLightning) 2021

CONTRIBUTED TALKS

EGU General Assembly. *Anvil cloud thinning in high-resolution models implies greater climate sensitivity.* Vienna, Austria. 2024.

EGU General Assembly. *Internal variability, multiple equilibria, and convection-SST coupling in a cloud-resolving model with an interactive ocean.* Vienna, Austria. 2024.

AGU Fall Meeting. *Anvil cloud thinning implies greater climate sensitivity.* San Francisco, CA. 2023.

AGU Fall Meeting. *Internal variability and multiple equilibria in cloud-resolving RCE with an interactive ocean.* San Francisco, CA. 2023.

NSF PIRE-Cirrus Workshop. *Tropical Cirrus—from micro-scale processes to climate-scale impacts.* Friday Harbor, WA. 2023.

AGU Fall Meeting. *The convective response to warming in cloud-resolving simulations with an interactive ocean.* Chicago, IL. 2022.

Advanced Climate Dynamics Summer School. *Tropical convective clouds in a changing climate.* Rondane, Norway. 2022.

CFMIP. *On the relationship between large-scale radiative divergence and anvil cloud fraction in RCEMIP.* Seattle, WA. 2022.

AGU Fall Meeting. *Invited eLightning: The response of tropical cloud ice amount to surface warming.* New Orleans, LA. 2021.

AGU Fall Meeting. *Circulation, convection, and static stability in cloud-resolving simulations of radiative-convective equilibrium*. New Orleans, LA. 2021.

Graduate Climate Conference. *Tropical Anvil Clouds: Radiative Driving Towards a Preferred State*. Virtual. 2020.

NSF PIRE-Cirrus Workshop, 2019. *Satellite observations of tropical anvil cloud evolution*. Friday Harbor Laboratories, WA.

CONTRIBUTED POSTERS

CFMIP. *Invigoration of the congestus mode by convective aggregation in simulations of radiative-convective equilibrium*. Seattle, WA. 2022.

AGU Fall Meeting. *Tropical Anvil Clouds: Observations of a Preferred State*. Virtual. 2020.

AGU Fall Meeting. *Satellite observations of tropical anvil cloud evolution*. San Francisco, CA. 2019.

AGU Fall Meeting. *Eddy Covariance Measurements of Methane Emissions from a Dairy Farm Waste Lagoon*. San Francisco, CA. 2016.