Travis Aerenson

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Education

University of Washington, Seattle, WA *Expected 2024*
PhD, Atmospheric Sciences

University of Washington, Seattle, WA *May 2021*
Master of Science, Atmospheric Sciences
Thesis Title: When Will MISR Detect Rising High Clouds?

Colorado College, Colorado Springs, CO
Bachelor of Arts, Major: Physics *May 2019*
Major GPA: 3.7

Research Experience

Research Assistant, **UW Department of Atmospheric Sciences, Seattle WA** *Aug 2019-Present*
- Advised by Dr. Roger Marchand

Research Intern, **National Center for Atmospheric Research, Boulder, CO** *Jun -Aug 2018*

Research Intern, **National Center for Atmospheric Research, Boulder, CO** *Jun -Aug 2017*

Teaching Experience

Teaching Assistant, **UW Department of Atmospheric Sciences, Seattle WA** *Mar 2021-Jun 2021*
- ATM S 100: Climate Justice & Energy Solutions

Quantitative Reasoning Center Math and Physics tutor, **Colorado College** *Mar 2017-May 2019*

Publications

In Preparation:

Aerenson, T., Marchand, R., Zhou, C.: Cloud Feedbacks from Abrupt Solar and CO_2 Forcing

Aerenson, T., Marchand, R., Zhou, C.: Cloud Adjustment to Abrupt Solar and CO_2 Forcing in Coupled Models

Frierson, D., Poletti, A., **Aerenson, T**., Nikumbh, A., Carroll, R., Henshwaw, W.: Atmosphere and Ocean Energy Transport in Extreme Warming Scenarios

Aerenson, T., Tebaldi, C., Lamarque, J.F., Lawrence, D., Lipscomb, B., Long, M., Koven, C., Rosenbloom, N., Strand, G.: Abrupt Reversing of Climate Change in CESM2

Published:

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Aerenson, T., Marchand, R., Chepfer, H., Medeiros, B. (2022). When Will MISR Detect Rising High Clouds? *Journal of Geophysical Research: Atmospheres, 127(2)*, e2021JD035865. https://doi.org/10.1029/2021JD035865

Aerenson, T., Tebaldi, C., Sanderson, B., Lamarque, J.F. (2018). Changes in a suite of indicators of extreme temperature and precipitation under 1.5 and 2 degrees warming. *Environmental Research Letters* https://doi.org/10.1088/1748-9326/aaafd6

Scientific Presentations

Aerenson, T., R. Marchand, C. Zhou 2022: "Cloud Response to Abrupt Changes in Solar Forcing and CO_2 Concentrations" AGU Fall Meeting: Advances in Solar Radiation Modification Research, Chicago, IL. *Poster*

Aerenson, T., R. Marchand, C. Zhou 2022: "Cloud Response to Abrupt Changes in Solar Forcing and CO_2 Concentration" University of Washington Department of Atmospheric Sciences Seminar on Atmospheric Physics and Chemistry, Seattle, WA. *1 hour seminar*

Aerenson, T., R. Marchand 2022: "Cloud Response to Abrupt Changes in Solar Forcing and CO_2 Concentrations" CFMIP Meeting: Cloud Processes and Radiative Feedbacks, Seattle, WA. *Oral*

Aerenson, T. 2021: "Cloud Rapid Adjustments and Feedbacks to Abrupt Changes in Solar and CO_2 Induced Forcings" AGU Fall Meeting: Advances in Climate Engineering Research. *Virtual Poster*

Aerenson, T., R. Marchand 2021: "Cloud Rapid Adjustments and Feedbacks to Abrupt Changes in Solar and CO_2 Induced Forcing" CFMIP Meeting. *Virtual Poster*

Aerenson, T. 2021: "When Will MISR Detect Rising High Clouds?" University of Washington Department of Atmospheric Sciences Physics and Chemistry Seminar. *Virtual Seminar*

Aerenson, T., R. Marchand 2021: "Time of Emergence: When Will We See High Clouds Get Higher?" AMS Annual Meeting. *Remote oral presentation and discussion session*

Aerenson, T., R. Marchand, 2020: "Time of Emergence: When do Climate Models Predict Rising Cloud-Top-Height (CTH) Should be Detected by MISR?" CFMIP Meeting on Clouds, Precipitation, and Climate Sensitivity. *Remote submitted slide and discussion session*

Aerenson ,T., R. Marchand, 2020: "When will we see high clouds get higher?" MISR Science Team Meeting, Pasadena, CA. *Oral*

Aerenson, T., 2019: "Climate Models and Climate Change Reversibilitiy" Colorado College Physics Department Senior Seminar Series, Colorado Springs, CO. *1 hour seminar*

Aerenson, T., C. Tebaldi, B. Sanderson, J.F. Lamarque, 2017: "Climate Extremes in Low Warming Scenarios" NCAR CGD Integrated Assessment Modelling Weekly Meeting, Boulder, CO. *Oral*

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Scholarships and Awards

Certificate of Distinguished Service 2022: University of Washington Department of Atmospheric Sciences

Top Scholar Award 2019: University of Washington Department of Atmospheric Sciences