

## DR. OLIVIA E. CLIFTON

### Advanced Study Program Postdoctoral Fellow | National Center for Atmospheric Research

National Center for Atmospheric Research (NCAR)  
P.O. Box 3000  
Boulder, Colorado, 80307 USA

oclifton@ucar.edu  
(303) 497-8210  
www.oliviACLifton.com

#### Education

**Ph.D.** Columbia University, Earth & Environmental Sciences, 2018.

**B.S.** University of Wisconsin-Madison, Mathematics, 2012.

#### Professional Experience

**Postdoctoral Fellow** Advanced Study Program (ASP), NCAR, 2018-

**NSF Graduate Research Fellow** Columbia University, 2015-2018.

**Graduate Researcher** Columbia University, 2013-2014.

**Research Assistant** Columbia University, 2013.

**Undergraduate Researcher** University of Wisconsin-Madison, 2011-2012.

**Intern** NASA Student Airborne Research Program, 2012.

#### Peer-reviewed Publications

1. **Clifton, O. E.**, A. M. Fiore, J. W. Munger, and R. Wehr (2019), Spatiotemporal controls on observed daytime ozone deposition velocity over Northeastern U.S. forests during summer, *Journal of Geophysical Research: Atmospheres*. <https://doi.org/10.1029/2018JD029073>
2. Fiore, A. M., E. V. Fischer, S. Pandey Deolal, O. Wild, D. Jaffe, J. Staehelin, **O. E. Clifton**, et al., Peroxy acetyl nitrate (PAN) measurements at northern mid-latitude mountain sites in April: A constraint on continental source-receptor relationships, *Atmospheric Chemistry and Physics*, 18, 15345-15361. <https://doi.org/10.5194/acp-18-15345-2018>
3. Rieder, H., A. M. Fiore, **O. E. Clifton**, G. Correa, L. W. Horowitz, and V. Naik (2018), Combining model projections with site-level observations to estimate changes in distributions and seasonality of ozone in surface air over the USA, *Atmospheric Environment*. <https://doi.org/10.1016/j.atmosenv.2018.07.042>
4. **Clifton, O. E.**, A. M. Fiore, J. W. Munger, S. Malyshev, L. W. Horowitz, E. Shevliakova, F. Paulot, L. T. Murray, and K. L. Griffin (2017), Interannual variability in ozone removal by a temperate deciduous forest, *Geophysical Research Letters*, 44. <https://doi.org/10.1002/2016GL070923>
5. **Clifton, O. E.**, A. M. Fiore, G. Correa, L. W. Horowitz, and V. Naik (2014), Twenty-first century reversal of the surface ozone seasonal cycle over the northeastern United States, *Geophysical Research Letters*, 41. <https://doi.org/10.1002/2014GL061378> *Featured as an AGU EOS Research Spotlight.*
6. Fiore, A. M., J. T. Oberman, M. Y. Lin, L. Zhang, **O. E. Clifton**, D. J. Jacob, V. Naik, L. W. Horowitz, J. P. Pinto, and G. P. Milly, Estimating North American background ozone in U.S. surface air with two independent global models: Variability, uncertainties, and recommendations, *Atmospheric Environment*, 96. <https://doi.org/10.1016/j.atmosenv.2014.07.045>

#### Honors and Awards

NCAR ASP Postdoctoral Fellowship, 2018.

MIT Civil & Environmental Engineering Rising Star, 2017.

AMS First Place Oral Presentation, Third Conference on Atmospheric Biogeosciences, 2016.

NSF Graduate Research Fellowship, 2015.

NSF Graduate Research Fellowship Honorable Mention, 2014.

University of Wisconsin-Madison Holstrom Environmental Scholarship, 2012.

#### Professional Activities

**Member** NCAR ASP Professional Development Committee, 2018-

**Lead** Review paper on ozone dry deposition, 2018-

**Member** Air Quality Model Evaluation International Initiative (AQMEII) Steering Group 4, 2018-

## DR. OLIVIA E. CLIFTON

### Advanced Study Program Postdoctoral Fellow | National Center for Atmospheric Research

**Co-organizer** Lamont Climate Center Workshop on Ozone Dry Deposition, 2017

**Board Member** Women In Science at Columbia (WISC), 2017-2018

**Organizer** WISC Writing Workshop for NSF Graduate Research Fellowship Applicants, 2017

**Member** Lamont Colloquium Committee, 2014-2016

**Contributing Author** IPCC Working Group 1 Chapter 11, 2013

**Reviewer** *Atmospheric Chemistry and Physics, Biogeosciences, Environmental Science and Pollution Research, Environmental Pollution, Geoscientific Model Development, Geophysical Research Letters, Journal of Advances in Modeling Earth Systems, Journal of Geophysical Research-Atmospheres*

**Member** American Geophysical Union (since 2012), Earth Science Women's Network (ESWN; since 2012), Women In Science at Columbia (2013-2018)

### Teaching and Mentoring Experience

**Guest Lecturer** Atmospheric Aerosols, Columbia University, 2018.

**Research Mentor** Eleanor Pressman (Columbia College '19), 2017.

**Guest Lecturer** Introduction to Atmospheric Chemistry, Columbia University, 2017.

**Teaching Assistant** Earth's Environmental System: Climate, Columbia University, 2016.

**Teaching Assistant** Quantitative Models of Climate-Sensitive Natural and Human Systems, Columbia University, 2014.

**Teaching Assistant** Introduction to Atmospheric Chemistry, Columbia University, 2014.

### Invited Talks

1. [Forthcoming] Fourth Conference on Meteorology and Climate-Modeling for Air Quality (MAC-MAQ), Davis, CA, Sept. 2019
2. NASA Jet Propulsion Laboratory Climate Center Workshop on Air Quality - Ecosystem Interactions, Pasadena, CA 2019  
"Observations and modeling transformative for understanding ozone dry deposition"
3. NCAR Atmospheric Chemistry Observations and Modeling Seminar, Boulder, CO 2019  
"Constraints on ozone removal by land and implications for 21<sup>st</sup> Century ozone pollution"
4. Long-term Biosphere-Atmosphere Chemical Flux Workshop, Irvine, CA 2017  
"Why do we need long-term measurements of ozone dry deposition?"
5. Global Decadal Hydroclimate Predictability, Variability & Change Meeting, Palisades, NY 2014  
"21<sup>st</sup> Century Reversal of the Surface Ozone Seasonal Cycle over the Northeastern United States"

### First-author Presentations (P for poster)

1. [Forthcoming] NCAR MUSICA Kick-off Meeting, Boulder, CO May 2019
2. NCAR/NEON Workshop on Predicting life in the Earth system: linking the geosciences and ecology, Boulder, CO 2019  
"Why do we need long-term measurements of ozone dry deposition?"
3. NCAR Chemistry-Climate Working Group Meeting, Boulder, CO 2019  
"Coupling the land and atmospheric chemistry through ozone dry deposition in a global chemistry-climate model, and implications for ozone pollution"
4. NCAR Land Model and Biogeochemistry Working Group Meeting, Boulder, CO 2019  
"Simulating the terrestrial sink of tropospheric ozone with a global land model and its influence on ozone pollution"
5. American Geophysical Union Fall Meeting, Washington, DC 2018 (P)  
"What controls variations in summertime ozone dry deposition over the Northeastern US? Observational and modeling insights, and implications for ozone pollution"
6. American Geophysical Union Fall Meeting, New Orleans, LA 2017  
"Surface ozone seasonality under global change: Influence from dry deposition and isoprene emissions at northern mid-latitudes"
7. Lamont Climate Center Workshop on Ozone Dry Deposition, Palisades, NY 2017  
"Interannual variability in ozone dry deposition at a temperate deciduous forest"
8. 5<sup>th</sup> Integrated Land Ecosystem-Atmosphere Processes Study Science Conference, Oxford, UK 2017

## DR. OLIVIA E. CLIFTON

### Advanced Study Program Postdoctoral Fellow | National Center for Atmospheric Research

- “Interannual variability in ozone dry deposition at a temperate deciduous forest”
9. New York City Metro Area Energy and Air Quality Data Gaps Workshop, Palisades, NY 2017 (P)  
“Interannual variability in ozone dry deposition at a temperate deciduous forest”
10. Annual Harvard Forest Ecology Symposium, Petersham, MA 2017 (P)  
“Interannual variability in ozone dry deposition at Harvard Forest”
11. International Global Atmospheric Chemistry Science Conference, Breckenridge, CO 2016 (P)  
“Interannual variability in ozone dry deposition at a temperate deciduous forest”
12. International Summer School on Atmospheric and Oceanic Sciences: Advanced Programming Techniques for the Earth System Science, L’Aquila, Italy 2016 (P)  
“Hierarchy of models for investigating role of dry deposition on air quality-climate connections”
13. 3<sup>rd</sup> Conference on Atmospheric Biogeosciences, Salt Lake City, UT 2016  
“Non-stomatal uptake controls interannual variability in ozone dry deposition at a northern mid-latitude broadleaf deciduous forest”
14. European Geophysical Union 2016 Conference, Vienna, Austria 2016  
“Phenological controls on interannual variability in ozone dry deposition velocity”
15. NASA Air Quality Applied Sciences Team 7 Meeting, Cambridge, MA 2014 (P)  
“21<sup>st</sup> Century Reversal of the Surface Ozone Seasonal Cycle over the Northeastern United States”
16. 3<sup>rd</sup> Chemistry-Climate Modeling Initiative Workshop, Lancaster, UK 2014 (P)  
“21<sup>st</sup> Century Reversal of the Surface Ozone Seasonal Cycle over the Northeastern United States” *Recipient of International Global Atmospheric Chemistry (IGAC) travel grant*
17. First Year Colloquium, Palisades, NY 2014  
“21<sup>st</sup> Century Reversal of the Surface Ozone Seasonal Cycle over the Northeastern United States”
18. American Geophysical Union Fall Meeting, San Francisco, CA 2013 (P)  
“Shifting seasonal cycles of surface ozone: the role of regional vs. global emission changes in Northeast & Mountainous West U.S.”
19. New York State Energy Research and Development Authority Environmental Monitoring, Evaluation and Protection in New York: Linking Science and Policy Conference, Albany, NY 2013 (P)  
“Shifting seasonal cycles of surface ozone: the role of regional vs. global emission changes in Northeast & Mountainous West U.S.”
20. Columbia University Atmospheric Chemistry Symposium, New York, NY 2013  
“Shifting seasonal cycles of surface ozone: the role of regional vs. global emission changes”
21. American Geophysical Union Fall Meeting, San Francisco, CA 2012 (P)  
“Estimating Western U.S. Oil & Gas Emissions with OMI NO<sub>2</sub> Data”
22. NASA Student Airborne Research Program, Irvine, CA 2012  
“Modeling time evolution of C<sub>5</sub> alkyl nitrates for use as indicator species of crude oil emissions in southern California”
23. NASA Air Quality Applied Sciences Team 3 Meeting, Madison, WI 2012 (P)  
“Estimating Western U.S. Oil & Gas Emissions with OMI NO<sub>2</sub> Data”

### Outreach Activities

**Lunchtime Mentor** Lamont Secondary School Field Research Program, Palisades, NY 2014, 2016, 2018.

**Presenter** Lamont Open House, Palisades, NY 2014, 2016, 2017.

**Presenter** Career Day, Public School 180, New York, NY 2017.

**Presenter** Columbia University EESC UN2100 Field Trip to Lamont, Palisades, NY 2015, 2016.

**Presenter** Earth2Class, Palisades, NY 2016.

**Panelist** Inspiring Voices: STEAM Working Professionals Panel, Potomac, MD 2015.

**Presenter** Pascack Hills High School Girls’ Climate Stewards Club, Palisades, NY 2014.

**Exhibitor** Princeton Plasma Physics Laboratory Young Women’s Conference, Princeton, NJ 2014.

**Experimental Leader** Women In Science at Columbia Girls’ Science Day, New York, NY 2013.

**Presenter** Expand Your Horizons, Madison, WI 2012.