

Gina M. Mazzuca

Curriculum Vitae

Address

Department of Atmospheric & Oceanic Science (AOSC)
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Education

Ph.D. Atmospheric & Oceanic Science, University of Maryland (UMD; in progress)

M.S. Atmospheric & Oceanic Science, UMD (May 2016)

B.S. Meteorology (**Minor** Physics), Millersville University of Pennsylvania (May 2013)

Employment

Ph.D. Candidate, Graduate Research Assistant, UMD (September 2013 – Present)

National Atmospheric Deposition Program (NADP) - Site Operator, Beltsville, MD (November 2014 – Present)

The Clean Air Status and Trends Network (CASTNET) Site Operator, Beltsville, MD (November 2014–Present)

Graduate Teaching Assistant, UMD (September 2013 – May 2014)

Teaching

Co-Advisor, Undergraduate Student Senior Research Project (2016-2017) UMD

Discussion Instructor, AOSC 200: Weather and Climate (September 2013 – May 2014) UMD

Lab Instructor, AOSC 201: Weather and Climate Lab (September 2013 – May 2014) UMD

Publications

- **Mazzuca, G. M.**, X. Ren, C. P. Loughner, M. Estes, J. H. Crawford, K. E. Pickering, A. J. Weinheimer, and R. R. Dickerson, 2016: Ozone production and its sensitivity to NO_x and VOCs: results from the DISCOVER-AQ field experiment, Houston 2013. *Atmospheric Chemistry and Physics*, **16**, 14463–14474, doi:10.5194/acp-16-14463-2016.
- **Mazzuca, G. M.**, K. E. Pickering, R. D. Clark, C. P. Loughner, A. Fried, D. C. S. Zweers, A. J. Weinheimer, and R. R. Dickerson, 2017: Use of tethered and aircraft profiles to study the impact of mesoscale and microscale meteorology on air quality. *Atmospheric Environment*, **149**, 55–69, doi:http://dx.doi.org/10.1016/j.atmosenv.2016.10.025.
- Ren, X., and Coauthors, 2016: Atmospheric mercury measurements at a suburban site in the Mid-Atlantic United States: Inter-annual, seasonal and diurnal variations and source-receptor relationships. *Atmospheric Environment*, **146**, 141–152, doi:http://dx.doi.org/10.1016/j.atmosenv.2016.08.028.

Conference and Workshop Presentations

- **American Meteorological Society (AMS)** – Oral presentation (January 2017) “Ozone Production and Its Sensitivity to NO_x and VOCs: Results from the DISCOVER-AQ Field Experiment, Houston 2013”
- **American Meteorological Society (AMS)** – Oral presentation (January 2016) “Cloud-resolved simulations of deep convective storms observed during the DISCOVER-AQ campaign”
- **DISCOVER-AQ Science Team Meeting** – Oral presentation (May 2015)

“Observations of the Influence of Thunderstorms on Air Quality during the Maryland and Colorado Deployments”

- **American Meteorological Society (AMS)** – Oral Presentation (January 2015)
“Analysis of Lower Tropospheric Trace Gas Profiles Obtained from a Unique Combination of Aircraft and Tethered Balloon Observations”
- **American Meteorological Society (AMS)** – Poster Presentation (January 2013)
“Thunderstorm characteristics correlated with terrestrial gamma ray flashes observed by Fermi Gamma-Ray Burst Monitor, RHESSI, and MODIS”
- **American Geophysical Union (AGU)** – Poster Presentation (November 2012)
“Thunderstorm characteristics correlated with terrestrial gamma ray flashes observed by Fermi Gamma-Ray Burst Monitor, RHESSI, and MODIS”

Relevant Experience

AMS Policy Colloquium 2017: Participant in the 2017 AMS Policy Colloquium, Washington D.C.

Office of Science and Technology Policy (OSTP) Executive Office of the President Intern:

Environment and Energy Division, Eisenhower Executive Office Building, Washington D.C.
(Fall 2016)

NASA: DISCOVER-AQ, Field Campaigns, Edgewood MD, Huron CA, Golden CO

Flew meteorological and trace gas instruments on tethered balloon as well as maintained and calibrated surface trace gas analyzers. Conditioned and deployed prototype NO₂ sonde developed by The Royal Netherlands Meteorological Institute (KNMI) on tethered sonde and P-3B aircraft (May 2011 – August 2014)

RAMMPP: Regional Atmospheric Measurement, Modeling, and Prediction Project, College Park, MD

Installed and flew meteorological and trace gas instruments on Cessna 402B aircraft (May 2014 – January 2015)

Heliophysics Research Experience for Undergraduates – University of Alabama, Huntsville

Research on mechanisms and thunderstorm characteristics of terrestrial gamma ray flashes (TGFs) as well as solar interactions with Earth’s upper atmosphere (May 2012 – August 2012)

Awards and Leadership

- Recipient of the departmental **Outstanding Publication Award** in Atmospheric Sciences (December 2016) UMD
- Recipient of the **Ann Wylie Green Fund Scholarship Award** (May 2016) UMD
- Recipient of **AMS 18th Conference on Atmospheric Chemistry Outstanding Student Platform Presentation Award** (January 2016)
- Recipient of a **NASA Group Achievement Award** to the DISCOVER-AQ team (June 2015)
- Volunteer Teaching Assistant, AOSC 470/600: Undergraduate / Graduate Synoptic Meteorology), UMD
- Co-organizer, Launch UMD – UMD Weather Balloon crowd funding project, University of Maryland, September – October 2015
- Tutor, UMD