

# Zachary Fasnacht

10201 Baltimore Ave  
College Park, MD 20740

Phone: (717) 824-7540  
E-Mail: zfasnacht@atmos.umd.edu

## Education

---

**University of Maryland** 2014-2016  
Masters of Science in Atmospheric Science

**The Pennsylvania State University** 2010-2014  
Bachelors of Science in Meteorology

**University of Virginia** Summer 2013  
Intensive Summer School for Computing in Environmental Sciences

## Research Experience

---

**University of Maryland/NASA Goddard Space Flight Center** 2014-2016  
*Graduate Research Assistant*

- Performed research analyzing the impact of stratospheric intrusions on tropospheric and boundary layer composition with Matlab and Python using measurements from NASA DISCOVER-AQ and NASA SEAC4RS field campaigns
- Compared stratospheric intrusion measurements with simulations from GEOS-5 and CMAQ models using IDL to evaluate model ability to simulate stratospheric intrusions

**NASA Goddard Space Flight Center** Summer 2013  
*Atmospheric Science Intern*

- Worked in Atmospheric Chemistry and Dynamics Laboratory at NASA evaluating global biomass-burning model comparing with MODIS and MISR retrieved aerosol optical depth

## Teaching Experience

---

**Pennsylvania State University** 2013-2014  
*Teaching Assistant*

- Gave weekly lectures and additional assistance in introductory meteorology course for non-majors

## Leadership Experience

---

**Penn State Campus Weather Service** 2013-2014  
*Head of Forecasting*

- Oversaw operational forecasting procedures and prepared forecasting workshops for student forecasters

## Publications

---

Ott, L., Duncan, B., Thompson, A., Diskin, A., Fasnacht, Z., Langford, A., Lin, M., Molod, A., Nielsen, J., Pusede, S., Weinheimer, A., Yoshida, Y., *Frequency and Impact of Summertime Stratospheric Intrusions over Maryland during DISCOVER-AQ (2011): New Evidence from NASA's GEOS-5 Simulations*. JGR. In Preperation.

## Presentations

---

Fasnacht, Z., Thompson, A., Ott, L., Duncan, B., and Kollonige, D. *Case Studies of Stratospheric Intrusions During DISCOVER AQ MD & Houston*. NASA DISCOVER-AQ Science Team Meeting, Boulder, May 2015.