

## Alexander V. Matus

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### CONTACT INFORMATION

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### EDUCATION

**University of Wisconsin-Madison**, PhD, Atmospheric and Oceanic Sciences, Aug. 2017

**University of Wisconsin-Madison**, MS, Atmospheric and Oceanic Sciences, Aug. 2013

**Pennsylvania State University**, BS (Honors), Meteorology, May 2009

### PUBLICATIONS

**Matus, A.** and T. L'Ecuyer, 2017: The role of cloud phase in Earth's radiation budget, *J. Geophys. Res. Atmos.*, 122, 2559-2578.

Hang, Y., T. L'Ecuyer, and **Matus, A.**, 2017: Reassessing the role of cloud type in Earth's radiation budget after a decade of active spaceborne observations. Part I: Top of atmosphere and surface, *J. Climate*, in prep.

**Matus, A.** and T. L'Ecuyer, 2017: The role of marine cloud cover in enhancing aerosol heating and transport, *J. Geophys. Res. Atmos.*, in prep.

**Matus, A.**, T. L'Ecuyer, J. Kay, C. Hannay, and J. Lamarque, 2015: The role of clouds in modulating global aerosol direct radiative effects in spaceborne active observations and the Community Earth System Model, *J. Climate*, 28, 2986-3003.

### CONFERENCE PRESENTATIONS

**Matus, A.** and T. L'Ecuyer. 2016. Assessing the radiative effects of mixed-phase clouds using CloudSat and CALIPSO, CALIPSO/CloudSat Science Team Meeting, Newport News, VA.

**Matus, A.** and T. L'Ecuyer. 2014. Satellite estimates of aerosol species contributions to global aerosol direct effects. 94th AMS Annual Meeting. Atlanta, Georgia.

**Matus, A.** and A. Schloss. 2012. Real-time automated cloud classification from live webcams. ESIP Federation Winter Meeting 2012. Washington, D.C.

**Matus, A.**, L. Hudnall, J. Murray, and A. Krueger. 2010. The impacts on air traffic of volcanic ash from the 2009 Mount Redoubt eruptions. 90th AMS Annual Meeting. Atlanta, Georgia.

### RESEARCH EXPERIENCE

**NASA LARSS National Program**, Hampton, Virginia

*Intern at NASA Langley Research Center*

**May - August 2009**

Performed analysis of the 2009 Mount Redoubt eruptions and associated impacts on commercial aviation due to the dispersion of volcanic ash.

**NASA DEVELOP National Program**, Hampton, Virginia

*Intern at NASA Langley Research Center*

**May - August 2008**

Evaluated aspects of data processing associated with the CALIPSO mission and presented results live on NASA TV at NASA Headquarters in Washington, D.C.

**PERU: Environmental Issues Across the Americas**, Peru

*Interdisciplinary Researcher*

**December 2008**

Conducted interdisciplinary study at research stations in the Madre de Dios Region of Peru to investigate the effects of regional climate change on communities in Amazonia.

**ICELAND: Volcanoes, Glaciers, and their Societal Impacts, Iceland**

*Interdisciplinary Researcher*

**May 2008**

Conducted field work on aspects of geology, glaciology, and meteorology using lidar, GPS, and seismometers during a 12-day expedition across southern Iceland.

**HONORS AND AWARDS**

- Reid Bryson Scholarship, April 2016
- Lettau Award for Outstanding M.S. Thesis, April 2014
- Aviation, Range, and Aerospace Meteorology (ARAM) Best Student Paper, 2010
- Texas A&M University Regent's Graduate Fellowship, 2009-2010
- Pennsylvania State University Distinguished EMSAGE Laureate, 2009

**PROFESSIONAL WORKSHOPS**

**Community Earth System Model (CESM) Tutorial, Boulder, Colorado**

*Workshop Participant*

**July 2012**

Participated in a 5-day workshop for graduate students to learn how to interpret, initialize, and modify the CESM climate model for scientific applications.

**Weather and Society Integrated Studies (WAS\*IS), Boulder, Colorado**

*Workshop Participant*

**August 2010**

Engaged in a 9-day interdisciplinary workshop to discuss how atmospheric scientists can change the weather enterprise by integrating social science into meteorological practice.

**MENTORING EXPERIENCE**

**Center for Educational Opportunities (CEO), Madison, Wisconsin**

*Academic Coach*

**August 2011 - December 2012**

Provided academic tutoring and peer mentoring to undergraduate students.

**Penn State Branch of the AMS (PSUBAMS), State College, Pennsylvania**

*Organization Officer*

**August 2008 - May 2009**

Organized guest speaker events, internship and graduate school information sessions, and student mentorship programs for undergraduates.

**LEADERSHIP EXPERIENCE**

**Weather and Society Integrated Studies (WAS\*IS), Boulder, Colorado**

*Workshop Participant*

**August 2010**

Engaged in a 9-day interdisciplinary workshop to discuss how atmospheric scientists can change the weather enterprise by integrating social science into meteorological practice.

**NCAR Undergraduate Leadership Workshop, Boulder, Colorado**

*Workshop Participant*

**June 2008**

Participated in a 5-day workshop to learn key professional leadership skills while gaining valuable insight on the atmospheric research community in Boulder.

**Penn State Campus Weather Service, State College, Pennsylvania**

*Team Leader*

**August 2005 - May 2009**

Led weekly shifts to produce weather forecasts for the campus newspaper, *The Daily Collegian*. Volunteered as a shift member to forecast for local radio and video clients.

**COMPUTER SKILLS**

- Languages: Python, MATLAB, Perl, C++, Visual Basic.
- Applications: L<sup>A</sup>T<sub>E</sub>X, ArcGIS, Google Earth, ENVI.
- Operating Systems: Unix/Linux, Windows.