Dr. Jennifer D. Small Griswold

Assistant Professor of Atmospheric Sciences
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Research Interests

Cloud Microphysics, Aerosols and Climate, Satellite Remote Sensing of Clouds and Aerosol

Education

- University of California, Santa Cruz, Santa Cruz CA
  Ph.D. Earth & Planetary Sciences, June 2009
  Thesis: Observational studies of the microphysics and dynamics of warm cumulus
- Rutgers, The State University of New Jersey, New Brunswick, NJ
  B.S. Meteorology, May 2002
  B.S. Environmental Science, May 2002

Research Experience

- *Assistant Professor*, Department of Meteorology, University of Hawaii at Manoa, 2012-present

Cloud microphysics, Aerosol-Cloud-Climate Interactions and Remote Sensing of Clouds and Aerosols

- *Postdoctoral Researcher*, NASA Jet Propulsion Laboratory, 2009-2012

Influence of aerosols on clouds, precipitation and climate using multi-satellite data analyses and application of satellite observations to evaluate global climate.

- *Graduate Student Researcher*, UC Santa Cruz, 2002-2009

Observational studies of warm clouds using a flight phase Doppler interferometer to measure cloud drop size distributions and drop velocity for understanding the microphysical processes of precipitation initiation and mixing in warm clouds. Research supervised by Prof. Patrick Chuang.

Refereed Publications and Submitted Manuscripts

2016 - Norgren, M.S., **J.D. Small**, H.H. Jonsson and P.Y. Chuang, 2016: Observational estimates of detrainment and entrainment in non-precipitation shallow cumulus, *Atmos. Chem. Phys.*, **16**, 21-33, doi:10.5194/acp-16-21-2016

2013 - **Small, J.D.,** P.Y. Chuang, and H. Jonsson, 2013: Microphysical imprint of entrainment in warm cumulus*, Tellus B*, **65**, 19922, http://dx.doi.org/10.3402/tellusb.v65i0.19922 .

2011 - **Small, J.D.,** J. H. Jiang, H. Su, and Chengxing Zhai, 2011: Relationship between aerosol and cloud fraction over Australia*, Geophys. Res. Lett.*, 38, L23802, doi:10.1029/2011GL049404.

2009 - **Small, J.D.,** P.Y. Chuang, G. Feingold, H. Jiang, 2009: Can aerosol decrease cloud lifetime? *Geophys. Res. Lett.*, 36, L16806, doi:10.1029/2009GL038888.

2008 - **Small, J.D.** and P.Y. Chuang, 2008: New observations of precipitation initiation in warm cumulus clouds, *J. Atmos. Sci.*, **65**, 2972-2982, doi:10.1175/2008JAS2600.1

Publications in Preparation

- Goodman, C. and **J.D. Small Griswold**: Climate Impacts on Density Altitude and Aviation Operations*, in prep for Weather, Climate and Society.*
- **Small Griswold, J.D.,** A. Gettleman, and A. Pattantyus, XXXX: Aerosol-Cloud Interactions in the Kilauea Plume, *in prep for Journal of Atmo Science*.

- **Small Griswold, J.D.,** P. Y. Chuang, and H. Jonsson, XXXX: Impact of Aerosol Amount on Drop Environment and Mixing Characteristics of Warm Continental Cumulus During GoMACCS *in prep for Journal of Atmo Science*.
- **Small Griswold, J.D.,** J. H. Jiang, and H. Su, XXXX: Aerosol-Cloud Interaction Flavors: On the relationship between aerosols and shallow cloud fraction as a function of region, season and aerosol type*, in prep for Nature Geoscience*.
- Rossiter, D.L, **J.D. Small**, H.H. Jonsson, and P.Y. Chuang, XXXX: Horizontal and vertical structure of drizzle in marine stratocumulus, *in prep for ACP*.

Conference Presentations

2016 - **Small Griswold, J.D.,** A. Heikkila, and A. Dobracki, 2016: Marine Stratocumulus Properties from the FPDR – PDI as a Function of Aerosol during ORACLES, Eos Trans. AGU, Fall Meet. Suppl. Abs. A41D-0066.

2016 - **Small Griswold, J.D.**, P.Y. Chuang, and H. H. Jonsson, 2016: Impact of Aerosol Amount on Drop Environment and Mixing Characteristics of Warm Continental Cumulus During GoMACCS, 17th International Conference on Clouds and Precipitation, Manchester, England, July 25-29, 2016. Oral Presentation Number 7.9.

2016 - **Small Griswold, J.D.**, P.Y. Chuang, and H. H. Jonsson, 2016: Aerosol-Cloud Interactions in Warm Continental Cumulus During GoMACCS, 96th AMS Annual Meeting, New Orleans, LA, January 10-14, 2016. Poster Presentation Number 786.

2015 - **Small Griswold, J.D.**, J.H. Jiang, and H. Su, 2015: On the relationship between aerosols and shallow cloud fraction as a function of region, season and aerosol type, 95th AMS Annual Meeting, Phoenix, AZ, January 4-8, 2015. Oral Presentation Number 3.2.

2014 - **Small Griswold, J.D.**, J.H. Jiang, and H. Su, 2014: Regional and Seasonal Variation in the Relationship Between Absorbing Aerosols and Cloud Fraction, AMS 14th Conference on Cloud Physics, Boston, MA, July 6-11, 2014. Oral Presentation Number J5.5.

2013 - **Small, J.D.**, J.H. Jiang, H. Su, and C. Zhai, 2013: Evaluation of Model Representations of Cloud-Aerosol Interactions in Biomass Burning Regions, *Eos Trans.*, AGU, Fall Meet. Suppl., San Francisco, CA, Dec 9-13, 2013. Abstract A51E-0058.

2012 - **Small, J.D.**, J.H. Jiang, H. Su, and C. Zhai, 2012: Biomass burning aerosol effects on cloud fraction over Australia, AMS Meeting, Oral Presentation, Abstract J1.4.

2011 - **Small, J.D.**, J.H. Jiang, H. Su, and C. Zhai, 2011: Biomass burning aerosol effects on cloud fraction over Australia, Eos Trans. AGU, Fall Meet. Suppl. Abstract A14A-05.

Grants, Fellowships and Awards

- *NSF CAREER:* A Comprehensive Investigation into Cloud-Aerosol Interactions Using Satellite, Aircraft and Model Data, Award Effective July 1, 2013 - June 30, 2018, ~$569,600
- *U. Hawai'i SEED Diversity and Equity Initiative Grant:* Women as Scientists Colloquium, $500
- Outstanding Postdoctoral Research Award, 2011

Teaching Experience

- *Assistant Professor*, University of Hawaii at Manoa, 2012-Present

  Undergraduate Non-Major Course and Lab: Introduction to Meteorology (MET 101/ATMO 101)

  Undergraduate Hawaii Theme Course: Pacific Climates and Cultures (MET 102/ATMO 102)

  Graduate Level Course and Lab: Satellite Data Applications (MET 611/ATMO 611)