**Alison D. Nugent, PhD**

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RESEARCH TOPICS

My primary research interests revolve around **mountains** and **tropical clouds**. This includes **dynamical** studies of orographic precipitation, **microphysical** studies of aerosol impacts on clouds (either from sea-salt particles, or accumulation mode aerosols), and the **development of new tools** to measure our atmosphere.  
  
A running theme is the inclusion of **surface and aircraft observations** as well as **numerical models** to understand convective initiation, precipitation onset and distribution, and how mountains (especially islands) affect our atmosphere. My favorite projects include both cloud physics and mountain meteorology!

RESEARCH APPOINTMENTS

**Assistant Professor** 2017 - Present

Department of Atmospheric Sciences, School of Ocean and Earth Science and Technology

University of Hawai’i at M**ā**noa, Honolulu, HI

**NSF Atmospheric & Geospace Sciences Postdoctoral Research Fellow** 2015 - 2016

NSF AGS PRF at the National Center for Atmospheric Research (NCAR), Boulder, CO

EDUCATION

**Ph.D., Geology & Geophysics,** Yale University, New Haven, CT 2015

**M.Phil., Geology & Geophysics,** Yale University, New Haven, CT 2011

**B.A., Earth and Planetary Science**, Harvard University, Cambridge, MA 2009

PROFESSIONAL ACCOMPLISHMENTS

Currently developing a python & matlab computing course for Atmo. Majors 2017

Conference chair for AMS Annual meeting, Aerosol-Cloud-Climate Symposium 2017, exp 2018

Developed and taught a meteorological instrumentation course at Univ. of Hawai’i 2017

Invited talks at over 10 universities, domestic and international 2013-2017

Participated in 3 airborne field campaigns: DOMEX, DEEPWAVE, CSET 2011, 2014, 2015

Estwing Hammer Prize (exceptional performance as a Yale geology graduate student) 2013

2 Oral Presentation Awards at AMS Conferences 2011, 2012

FUNDING

***Under Review:***

KAMP proposal submitted to NSF deployment pool (co-pi, proposal pending) 2017

CAMP2Ex proposal submitted to NASA ROSES (co-pi, proposal pending) 2016

***Funded:***

Open Educational Resource (OER) for Intro. Atmo. Course Materials at UHM, $4,900 2017

NSF AGS Postdoctoral Research Fellowship, $172,000 2014

PEER REVIEWED PUBLICATIONS

***Published:***

Jensen, J. and **A. D. Nugent**, 2017: Condensational growth of drops formed on giant sea-salt aerosol particles. *J. Atmos Sci*., **74**, 679- 697.

**Nugent, A. D.**, R. B. Smith, C. D. Watson, and G. Thompson, 2016: Aerosol impacts on thermally driven orographic convection. *J. Atmos. Sci*. **73**, 3115-3132.

Smith, R. B., **A. D. Nugent**, C. G. Kruse, D. C. Fritts, J. D. Doyle, S. D. Eckermann, M. J. Taylor, A. Doernbrack, M. Uddstrom, W. Cooper, P. Romashkin, J. B. Jensen, S. Beaton, 2016: Stratospheric Gravity Wave Fluxes and Scales during DEEPWAVE. *J. Atmos. Sci*., **73**, 2851-2869.

Fritts, D. C., R. B. Smith, M. J. Taylor, J. D. Doyle, S. D. Eckermann, A. Dörnbrack, M. Rapp, B. P. Williams, P.-D. Pautet, K. Bossert, N. R. Criddle, C. A. Reynolds, P. A. Reinecke, M. Uddstrom, M. J. Revell, R. Turner, B. Kaifler, J. S. Wagner, T. Mixa, C. G. Kruse, **A. D. Nugent,** C. D. Watson, S. Gisinger, S. M. Smith, R. S. Lieberman, B. Laughman, J. J. Moore, W. O. Brown, J. A. Haggerty, A. Rockwell, G. J. Stossmeister, S. F. Williams, G. Hernandez, D. J. Murphy, A. R. Klekociuk, I. M. Reid, J. Ma, 2015: The Deep Propagating Gravity Wave Experiment (DEEPWAVE): An Airborne and Ground-Based Exploration of Gravity Wave Propagation and Effects from their Sources throughout the Lower and Middle Atmosphere. *Bull. Amer. Met. Soc*., **97**, 425-453.

Watson, C. D., R. B. Smith, and **A. D. Nugent**, 2015: Processes controlling precipitation in shallow, orographic, trade-wind convection. *J. Atmos. Sci.*, **72**, 3051–3072.

**Nugent, A. D**., and R. B. Smith, 2014: Initiating convection in an inhomogeneous layer by uniform ascent. *J. Atmos. Sci.*, **71**, 4597–4610.

**Nugent, A. D**., J. R. Minder, and R. B. Smith, 2014: Wind speed control of tropical orographic convection. *J. Atmos. Sci.*, **71**, 2695-2712.

Minder, J. R., R. B. Smith, and **A. D. Nugent**, 2013: The dynamics of ascent-forced orographic convection in the tropics: results from Dominica. *J. Atmos. Sci.*, **70**, 4067–4088.

Smith, R. B., J. R. Minder, **A. D. Nugent**, T. Storelvmo, D. J. Kirshbaum, R. Warren, N. Lareau, P. Palany, A. James, and J. French, 2012: Orographic Precipitation in the Tropics: The Dominica Experiment. *Bull. Amer. Meteor. Soc.*, **93**, 1567–1579.

***In Prep & Review:***

**Nugent, A. D.** and R. Rios-Berrios, 2017: Factors contributing to heavy precipitation on Dominica during Tropical Storm Erika. In preparation for *J. Atmos. Sci.* Submission expected August 2017.

Watson, C. D., **A. D. Nugent**, C. G. Kruse, A. Takeishi, R. B. Smith, 2018: The role of convection in orographic precipitation over New Zealand. In preparation for *J. Hydro.*

**Nugent, A. D.** and J. B. Jensen, 2018: Giant sea salt aerosols observed during the VOCALS field campaign. In preparation for *Atmos. Chem. Phys.*