

Alison D. Nugent, Ph.D.

Assistant Professor of Atmospheric Science
University of Hawai'i at Manoa

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EDUCATION

Yale University, M.Phil. and Ph.D. Geology & Geophysics Sept 2009 - Dec 2014

Thesis Title: Orographic Convection and Precipitation in the Tropics
Thesis Advisor: Ronald B. Smith

Harvard University, B.S. Earth and Planetary Science Sept 2005 - Jun 2009

Senior Thesis: The Existence of Cold Cores above Large Atmospheric Disturbances
Senior Thesis Advisor: Kerry A. Emanuel

PROFESSIONAL EXPERIENCE

National Science Foundation (NSF) Atmospheric Geospace Science (AGS) Postdoctoral Research Fellowship (PRF) at the National Center for Atmospheric Research Dec 2014 – Present

Title: Aerosols in Shallow Tropical Convection: Impact on Cloud Microphysics and Precipitation
Collaborating with Gregory Thompson and Jørgen B. Jensen

FIELD EXPERIENCE

CSET (Cloud System Evolution in the Trades, measuring the stratocumulus to cumulus transition) 2015
Role: Process in-situ aircraft data, assist with instrumentation, performed initial analysis to create research flight leg table, instrument trouble shooting

DEEPWAVE (Deep propagating gravity waves over New Zealand with the NSF/NCAR GV) 2014
Role: Forecast for gravity wave events, flight plan, run and monitor instruments in flight, process in-situ aircraft data, create and maintain quick look website, analyze flux quantities of the gravity waves

DOMEX (Dominica Experiment focused on orographic precipitation with the UWKA) 2011
Role: Install and monitor instrumentation, act as primary flight scientist, forecast for orographic precipitation events, flight plan, process in-situ aircraft data, create and maintain quick look website

AWARDS

NSF AGS Postdoctoral Research Fellowship, \$172,000 2014
Estwing Hammer Prize (exceptional performance as a Yale geology graduate student) 2013
AMS Conference on Mountain Meteorology – 2nd Place Oral Presentation Award 2012
AMS Conference on Mesoscale Processes – 1st Place Oral Presentation Award 2011

PEER REVIEWED PUBLICATIONS

In Prep & Review:

Jensen, J. and **A. D. Nugent**, 2015: The remarkable condensational growth of drops formed on giant sea-salt aerosol particles. In review in *J. Atmos. Sci.*

Watson, C. D., **A. D. Nugent**, C. G. Kruse, A. Takeishi, C. Tsai, R. B. Smith, 2016: The role of convection in orographic precipitation over New Zealand. In preparation for *J. Atmos. Sci.*

Accepted or Published:

Nugent, A. D., C. D. Watson, and G. Thompson, R. B. Smith, 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, 2015: 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.