Jennifer **DeHart**

Research Scientist I

Fort Collins, CO

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Education

Ph.D., Atmospheric Sciences *2017*

University of Washington

- Thesis: Orographic modification of precipitation processes in a tropical cyclone moving over a continental mountain range

M.S., Atmospheric Sciences *2014*

University of Washington

- Thesis: Quadrant distribution of tropical cyclone inner-core kinematics in relation to environmental shear

B.S.E., Earth Systems Science and Engineering *2010*

University of Michigan

- Minor: History of Art

Experience

Research Scientist I *Fort Collins, CO*

Colorado State University *2019 - Present*

Postdoctoral Researcher *Fort Collins, CO*

Colorado State University *2017 - 2019*

Publications

DeHart, J. C., and M. M. Bell, in preparation: Mechanisms Contributing to the Heavy Rainfall Associated with a Meiyu Front near Taiwan.

DeHart, J. C., and M. M. Bell: A Comparison of the Polarimetric Radar Characteristics of Heavy Rainfall from Hurricanes Harvey (2017) and Florence (2018). J. Geophys. Res. Atmos., 125, e2019JD032212.

DeHart, J. C., and R. A. Houze, Jr., in preparation: Orographic modification of precipitation processes in a tropical cyclone moving over a continental mountain range.

DeHart, J. C., and R. A. Houze, Jr., 2017: Orographic modification of precipitation processes in Hurricane Karl (2010). *Mon. Wea. Rev.,* 145, 4171-4186.

Houze, R. A., Jr., L. A. McMurdie, W. A. Petersen, M. R. Schwaller, W. Baccus, J. Lundquist, C. Mass, B. Nijssen, S. A. Rutledge, D. Hudak, S. Tanelli, G. G. Mace, M. Poellot, D. Lettenmaier, J. Zagrodnik, A. Rowe, J. DeHart, L. Madaus, H. Barnes, 2017: The Olympic Mountains Experiment (OLYMPEX). *Bull. Amer. Meteor. Soc.*, 98, 2167-2188.

DeHart, J. C., R. A. Houze, Jr., and R. F. Rogers, 2014: Quadrant distribution of tropical cyclone inner-core kinematics in relation to environmental shear. *J. Atmos Sci.*, 71, 2713–2732.

Honors & Awards

Fellowship, NASA Earth and Space Sciences Fellowship *2015-2017*

1st Place Student Poster, 17th Conference on Mountain Meteorology *2016*

Field Campaigns

Forecaster, ONR Propagation of Intra-Seasonal Tropical Oscillations (PISTON) *2018*

Forecaster, NASA Olympic Mountains Ground Validation Experiment (OLYMPEX) *2015-2016*

Forecaster, NASA Hurricane and Severe Storms Sentinel (HS3) *2012-2014*

Undergraduate Assistant, Verification of the Origins of Rotation in Tornadoes Experiment 2 (VORTEX2) *2010*

Undergraduate Assistant, Project MOBILE (Texas Tech University) *2008*

Selected Presentations

DeHart, J. C. and M. M. Bell: Mechanisms Contributing to the Heavy Rainfall Associated with a Meiyu Front near Taiwan (January 2020). 100th AMS Annual Meeting, Boston, MA, talk.

DeHart, J. C. and M. M. Bell, Polarimetric Radar Analysis of Hurricane Harvey's (2017) Record-Setting Rainfall (September 2019). 39th AMS Radar Conference, Nara, Japan, poster.

DeHart, J. C. and M. M. Bell, Polarimetric Radar Analysis of Hurricane Harvey's (2017) Record-Setting Rainfall (December 2018). AGU Fall Meeting, Washington, D.C., poster.

DeHart, J. C. and R. A. Houze, Jr., The Impact of Terrain Height on Precipitation Processes in a Landfalling Tropical Cyclone (April 2018). 33rd Conference on Hurricanes and Tropical Meteorology, Ponte Vedra, FL, poster.

DeHart, J. C. and M. M. Bell, Polarimetric Radar Analysis of Hurricane Harvey's (2017) Record-Setting Rainfall (April 2018). 33rd Conference on Hurricanes and Tropical Meteorology, Ponte Vedra, FL, talk.

DeHart, J. C., Orographic modification of precipitation processes in a tropical cyclone moving over a continental mountain range (August 2017). University of Washington, Doctoral Defense.

DeHart, J. C., A. K. Rowe, J. P. Zagrodnik, H. C. Barnes, L. A. McMurdie, R. A. Houze, Jr., OLYMPEX: A Unique and Comprehensive Dataset for Understanding Precipitation Processes in Complex Terrain (January 2017). 97th AMS Annual Meeting, Seattle, WA, talk.

DeHart, J. C. and R. A. Houze, Jr., Characterizing the Precipitation Processes in Hurricane Karl (2010) Through Analysis of Airborne Doppler Radar Data and Numerical Simulations (December 2016). AGU Fall Meeting, San Francisco, CA, poster.

DeHart, J. C. and R. A. Houze, Jr., Precipitation Processes in Hurricane Karl (2010): Doppler Radar and WRF (June 2016). 17th Conf. on Mountain Meteorology, Burlington, VT, poster.

DeHart, J. C. and R. A. Houze, Jr., Characterizing the Structure of Hurricane Karl (2010): Doppler Radar and WRF (April 2016). 32nd Conference on Hurricanes and Tropical Meteorology, San Juan, PR, talk.

DeHart, J. C. and R. A. Houze, Jr., Hurricane Karl's landfall as seen by high-resolution radar data and WRF (October 2015). 17th Cyclone Workshop, Pacific Grove, CA, talk.

DeHart, J. C. and R. A. Houze, Jr., The Evolution of Hurricane Karl's Structure (May 2015). HS3 Science Team Meeting, Moffett Field, CA, talk. DeHart, J. C. and R. A. Houze, Jr., Characterizing the Structure of Hurricane Karl (2010) (December 2014). AGU Fall Meeting, San Francisco, CA, poster.

DeHart, J. C., R. A. Houze, Jr., and R. F. Rogers, Quadrant distribution of tropical cyclone innercore kinematics in relation to environmental shear (April 2014). 31st Conference on Hurricanes and Tropical Meteorology, San Diego, CA, talk.

DeHart, J. C., R. A. Houze, Jr., and R. F. Rogers, Organization of Tropical Cyclone Kinematics by Environmental Shear (May 2013). HS3 Science Team Meeting, Moffett Field, CA, poster.

DeHart, J. C. and R. A. Houze, Jr., Vertical Distribution of Radar Reflectivity in Hurricanes in the Presence of Shear (April 2012). 30th Conference on Hurricanes and Tropical Meteorology, Jacksonville, FL, talk.

Service and Outreach

Reviewer for Monthly Weather Review, Journal of the Atmospheric Sciences, Quarterly Journal of the Royal Meteorological Society, Journal of Geophysical Research, and Journal of Applied Meteorology and Climatology.

Coordinator, Graduate Students' Distinguished Speaker	*2014-2016*
President, AMS Student Chapter at UW	*2012-2014*
Committee Member, AMS Student Conference Planning Committee	*2013-2017*
Volunteer, UW Atmospheric Sciences Outreach Club	*2012-2017*

Professional Memberships

American Meteorological Society
American Geophysical Union