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Education

Ph.D., Atmospheric Science, University at Albany, State University of New York, May 2005.

M.S., Atmospheric Science, University at Albany, State University of New York, August 2000.

B.S. with Distinction, Atmospheric Science, Cornell University, May 1997.

Professional Experience

Assistant professor, Department of Atmospheric and Environmental Sciences, University at Albany, State University of New York, 2011-present.

Assistant professor, Department of Atmospheric and Oceanic Sciences, University of California Los Angeles, 2007-2011.

Affiliate faculty, Institute of the Environment and Sustainability, University of California Los Angeles, 2010-2011.

Postdoctoral research associate, Advanced Study Program, National Center for Atmospheric Research, 2005-2007.

Research assistant, Department of Earth and Atmospheric Sciences, University at Albany, State University of New York, 2000-2005.

Teaching assistant, Department of Earth and Atmospheric Sciences, University at Albany, State University of New York, 1997-2000.

Refereed Publications

Corbosiero, K. L., and J. Molinari, 2002: The effect of vertical wind shear on the distribution of convection in tropical cyclones. *Mon. Wea. Rev.*, **130**, 2110-2123.

Corbosiero, K. L., and J. Molinari, 2003: The relationship between storm motion, vertical wind shear and convective asymmetries in tropical cyclones. *J. Atmos. Sci.*, **60**, 366-376.

Molinari, J., D. Vollaro, and K. L. Corbosiero, 2004: Tropical cyclone formation in a sheared environment: A case study. *J. Atmos. Sci.*, **61**, 2493-2509.

Corbosiero, K. L., J. Molinari, and M. L. Black, 2005: The structure and evolution of Hurricane Elena (1985). Part I: Symmetric intensification. *Mon. Wea. Rev.*, **133**, 2905-2921.

Corbosiero, K. L., J. Molinari, A. R. Aiyyer, and M. L. Black, 2006: The structure and evolution of Hurricane Elena (1985). Part II: Convective asymmetries and evidence for vortex Rossby waves. *Mon. Wea. Rev.*, **134**, 3073-3091.

Molinari, J., P. Dodge, D. Vollaro, K. L. Corbosiero, and F. D. Marks, Jr., 2006: Mesoscale aspects of the downshear reformation of a tropical cyclone. *J. Atmos. Sci.*, **63**, 341-354.

Davis, C., W. Wang, S. S. Chen, Y. Chen, K. Corbosiero, M. DeMaria, J. Dudhia, G. Holland, J. Klemp, J. Michalakes, H. Reeves, R. Rotunno, and Q. Xiao, 2008: Prediction of landfalling hurricanes with the Advanced Hurricane WRF Model. *Mon. Wea. Rev.*, **136**, 1990-2005.

Corbosiero, K. L., M. J. Dickinson, and L. F. Bosart, 2009: The contribution of eastern North Pacific tropical cyclones to the warm season rainfall climatology of the southwest United States. *Mon. Wea. Rev.*, **137**, 2415-2435.

Fovell, R. G., K. L. Corbosiero, and H.-C. Kuo, 2009: Cloud microphysics impact on hurricane track as revealed in idealized experiments. *J. Atmos. Sci.*, **66**, 1764-1778.

Fovell, R. G., K. L. Corbosiero, A. Seifert, and K. N. Liou, 2010: Impact of cloud-radiative processes on hurricane track. *Geophys. Res. Lett.*, **37**, L07808, doi:10.1029/2010GL042691.

Abarca, S. F., K. L. Corbosiero, and T. J. Galarneau, Jr., 2010: An evaluation of the World Wide Lightning Location Network (WWLLN) using the National Lightning Detection Network (NLDN) as ground truth. *J. Geophys. Res.*, **115**, D18206, doi:10.1029/2009JD013411.

Abarca, S. F., K. L. Corbosiero, and D. Vollaro, 2011: The World Wide Lightning Location Network and convective activity in tropical cyclones. *Mon. Wea. Rev.*, **139**, 175-191.

Abarca, S. F., and K. L. Corbosiero, 2011: Secondary eyewall formation in WRF simulations of hurricanes Rita and Katrina (2005). *Geophys. Res. Lett.*, **38**, L07802, doi:10.1029/2011GL047015.

Cao, Y., R. G. Fovell, and K. L. Corbosiero, 2011: Tropical cyclone track sensitivity to initialization in idealized simulations: A preliminary study. Accepted to *Terr. Atmos. Ocean. Sci.*.

Other Publications

Corbosiero, K. L., 1999: Lightning in hurricanes. Preprints of the Twenty-third Conference on Hurricanes and Tropical Meteorology, 10-15 January, Dallas, Texas, American Meteorological Society, 66-67.

Corbosiero, K. L., 2000: Convective asymmetries in tropical cyclones. Preprints of the Twenty-fourth Conference on Hurricanes and Tropical Meteorology, 29 May-2 June, Fort Lauderdale, Florida, American Meteorological Society, 410-411.

Corbosiero, K. L., J. Molinari, and L. Bosart, 2001: The distribution of convective precipitation in tropical cyclones after landfall. Preprints of the Eighty-first Annual Meeting of the American Meteorological Society, Symposium on Precipitation Extremes: Prediction, Impacts and Responses, 14-18 January, Albuquerque, New Mexico, American Meteorological Society, 350-351.

Corbosiero, K. L., 2002: The relationship between storm motion, vertical wind shear and convective asymmetries in tropical cyclones. Preprints of the Twenty-fifth Conference on Hurricanes and Tropical Meteorology, 29 April-3 May, San Diego, California, American Meteorological Society, 321-322.

Corbosiero, K. L., 2004: The structure and evolution of a hurricane in vertical wind shear: Hurricane Elena (1985). Preprints of the Twenty-sixth Conference on Hurricanes and Tropical Meteorology, 3-7 May, Miami Beach, Florida, American Meteorological Society, 90-91.

Invited Presentations

The influence of vertical wind shear on tropical cyclones. Hurricane Research Division of the National Oceanic and Atmospheric Administration, 9 July 2002.

The effects of vertical wind shear on tropical cyclones. XEII Meteorological Honor Society Induction Ceremony, Valparaiso University, 4 May 2003.

The structure and evolution of a hurricane in vertical wind shear: Hurricane Elena (1985). National Center for Atmospheric Research, Mesoscale and Microscale Meteorology Seminar, 22 September 2005.

The inner core structure and intensity change of Hurricane Elena (1985). Institute for Pure and Applied Mathematics at the University of California, Los Angeles, Small Scales and Extreme Events: The Hurricane, 14 February 2007.

Investigating tropical cyclone structure and intensity change with the Advanced Hurricane WRF model. Institute for Geophysics and Planetary Physics, University of California, Los Angeles, 19 February 2008.

The contribution of eastern North Pacific tropical cyclones to the warm season rainfall climatology of the southwest United States. Environmental Science and Engineering Seminar Series, California Institute of Technology, 20 May 2009.

Vortex Rossby waves and secondary eyewall formation in high-resolution hurricane simulations. Department of Atmospheric and Oceanic Sciences, McGill University, 13 January 2011.

Vortex Rossby waves and secondary eyewall formation in high-resolution hurricane simulations. Department of Atmospheric and Environmental Sciences, University at Albany, State University of New York, 7 February 2011.

The World Wide Lightning Location Network (WWLLN): Network overview, evaluation and its application to tropical cyclone research. Department of Atmospheric Sciences, Texas A&M University, 15 February 2011.

Select Conference, Workshop and Symposia Presentations

Corbosiero, K. L., 2002: Can the environment of maritime tropical cyclones support supercell thunderstorms? 27th Northeast Storm Conference, 8-10 March, Saratoga Springs, New York, American Meteorological Society/National Weather Association.

Corbosiero, K. L., L. Bosart, M. J. Dickinson, S. Hopsch, K. Lombardo, M. Novak, B. Smith, and A. Wasula, 2003: Eastern Pacific tropical cyclones and the North American summer monsoon. 28th Northeast Storm Conference, 7-9 March, Saratoga Springs, New York, American Meteorological Society/National Weather Association.

Corbosiero, K. L., and J. Molinari, 2003: The structure and evolution of a hurricane in vertical wind shear: Hurricane Elena (1985). First Northeast Tropical Cyclone Workshop, 2-3 June, Rhinebeck, New York.

Corbosiero, K. L., 2005: Evidence for vortex Rossby waves in Hurricane Elena (1985). Second Northeast Tropical Cyclone Workshop, 6-9 June, Rensselaerville, New York.

Corbosiero, K. L., J. Molinari, A. R. Aiyyer, and M. L. Black, 2006: Inner core asymmetries and vortex Rossby waves in Atlantic basin tropical cyclones. 27th Conference on Hurricanes and Tropical Meteorology, 24-28 April, Monterey, California, American Meteorological Society.

Corbosiero, K. L., M. J. Dickinson, and L. Bosart, 2006: The contribution of eastern North Pacific tropical cyclones to the warm season rainfall climatology of the southwestern United States. Second International Symposium on Quantitative Precipitation Forecasting and Hydrology. 5-8 June, Boulder, Colorado, World Meteorological Organization.

Corbosiero, K. L., V. Cheruvu, J. Richter, C. Johnson and T. Eastburn, 2006: Climate and weather, the two go together: Girl Scouts at the National Center for Atmospheric Research program. Seventh International Conference on School and Popular Meteorological and Oceanic Education, 3-7 July, Boulder, Colorado, American Meteorological Society.

Corbosiero, K. L., M. J. Dickinson, and L. Bosart, 2006: Recurring eastern North Pacific tropical cyclones. 13th Cyclone Workshop, 23-26 October, Pacific Grove, California.

Corbosiero, K. L., W. Wang, Y. Chen, J. Dudhia, and C. Davis, 2007: Advanced research WRF high resolution simulations of the inner core structure of Hurricanes Katrina, Rita and Wilma (2005). Eighth Annual WRF User's Workshop, 11-15 June, Boulder, Colorado.

Corbosiero, K. L., M. J. Dickinson, and L. Bosart, 2007: The contribution of eastern North Pacific tropical cyclones to the warm season rainfall climatology of the southwest United States. Fourth Symposium on Southwest Hydrometeorology, 20-21 September, Tucson, Arizona.

Corbosiero, K. L., W. Wang, J. Done, J. Dudhia, and C. Davis, 2007: Inner core structures and intensity change simulated with the Advanced Hurricane WRF model. AGU Fall Meeting, 10-14 December, San Francisco, California.

Corbosiero, K. L., W. Wang, J. Done, J. Dudhia, and C. Davis, 2008: Inner core structures and intensity change simulated with the Advanced Hurricane WRF model. 28th Conference on Hurricanes and Tropical Meteorology, 28 April-2 May, Orlando, Florida, American Meteorological Society.

Fovell, R. G., K. L. Corbosiero, and H.-C. Kuo, 2008: Cloud microphysics impact on hurricane track as revealed in idealized experiments. Ninth Annual WRF User's Workshop, 23-27 June, Boulder, Colorado.

Corbosiero, K. L., M. J. Dickinson, and L. Bosart, 2008: Recurring eastern North Pacific tropical cyclones. 14th Cyclone Workshop, 22-26 September, Sainte-Adèle, Quebec, Canada.

Corbosiero, K. L., and T. J. Galarneau, Jr., 2009: Verification of a daily thunderstorm probability forecast contest using the National Lightning Detection Network. 23rd Conference on Weather Analysis and Forecasting, 1-5 June, Omaha, Nebraska, American Meteorological Society.

Corbosiero, K. L., and K. A. Shontz, 2010: The distribution of helicity and intense convection in tropical cyclones. 29th Conference on Hurricanes and Tropical Meteorology, 10-14 May, Tucson, Arizona, American Meteorological Society.

Corbosiero, K. L., M. J. Dickinson, and L. Bosart, 2010: Recurring eastern North Pacific tropical cyclones. 29th Conference on Hurricanes and Tropical Meteorology, 10-14 May, Tucson, Arizona, American Meteorological Society.

Corbosiero, K. L., 2011: Verification of thunderstorm occurrence using the National Lightning Detection Network. Fifth Conference on the Meteorological Applications of Lightning Data. 24-26 January, Seattle, Washington, American Meteorological Society.

Corbosiero, K. L., S. F. Abarca, G. B. Raga, and F. O. Rosales, 2011: Tropical cyclone lightning characteristics as revealed by the World Wide Lightning Location Network (WWLLN). Fifth Conference on the Meteorological Applications of Lightning Data. 24-26 January, Seattle, Washington, American Meteorological Society.

Corbosiero, K. L., R. McTaggart-Cowan, and L. Bosart, 2011: The impact of recurring eastern Pacific tropical cyclones on the downstream North American flow pattern. 15th Cyclone Workshop, 27 March-1 April, Pacific Grove, California.

Theses

Corbosiero, K. L., 2000: The effects of vertical wind shear and storm motion on the distribution of lightning in tropical cyclones. Department of Earth and Atmospheric Sciences, University at Albany, State University of New York, 105 pp.

Corbosiero, K. L., 2005: The structure and evolution of a hurricane in vertical wind shear. Department of Earth and Atmospheric Sciences, University at Albany, State University of New York, 148 pp.

Honors / Awards

College Scholars Teaching Fellowship, University at Albany, State University of New York, 1997-2000.

Distinguished Dissertation Award, University at Albany, State University of New York, 2005.

Narayan R. Gokhale Distinguished Research Award, University at Albany, State University of New York, 2005.

Monthly Weather Review Editor's Award, "For providing thorough reviews of a large number of manuscripts and for special assistance to the editors in evaluating controversial manuscripts.", 2010.

Faculty Career Development Award, University of California Los Angeles, 2011.

Funded Grants and Awards

"Using Lightning Flash Locations to Characterize Eastern North Pacific Tropical Cyclones", University of California Institute for Mexico and the United States - Mexican National Council for Science and Technology (UCMEXUS-CONACYT), 07/01/10 – 12/31/11, \$25,000.

"Satellite Observations of Tropical Storm Formation", Jet Propulsion Lab (JPL) sub-award (from "Satellite and In Situ Observations over the Southeast Pacific Ocean") to the JPL/UCLA Joint Institute for Regional Earth System Science and Engineering, 09/16/10 – 09/15/11, \$45,610.

"Eastern North Pacific Ocean Tropical Cyclone Characteristics as Revealed by the World Wide Lightning Location Network", University of California Los Angeles, Faculty Career Development Award, 06/12/11-09/18/11, \$10,000.

Other Education

National Center for Atmospheric Research Advanced Study Program Summer Colloquium: The Tropical Atmosphere and Oceans, Boulder, Colorado, 9-20 July 2001.

Professional Affiliations

American Meteorological Society, 1994-present.

American Geophysical Union, 2006-present.

National Weather Association, 2009-present.

Royal Meteorological Society, 2011-present.

Professional Service

Representative to the University Corporation for Atmospheric Research from the University of California, Los Angeles, 2007-2011.

Associate Editor, *Monthly Weather Review*, 2008-present.

Chair, Max Eaton Award Committee, American Meteorological Society's 28th Conference on Hurricanes and Tropical Meteorology, 2008.

Member of the National Centers for Environmental Prediction external review panel for the Ocean Prediction Center and the National Hurricane Center/Tropical Prediction Center, 2009-2011.

Member of the American Meteorological Society Science and Technological Activities Commission on Tropical Meteorology and Tropical Cyclones, 2010-present.

Reviewer for the National Science Foundation, *Journal of the Atmospheric Sciences*, *Journal of Climate*, *Weather and Forecasting*, *Dynamics of Atmospheres and Oceans*, *Quarterly Journal of the Royal Meteorological Society*, and *Nature Geosciences*.