

Curriculum Vitae

(July 2017)

**Richard H. Johnson, Professor Emeritus
Department of Atmospheric Science
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Education

1975 Ph.D. University of Washington – Atmospheric Sciences
1969 M.S. University of Chicago – Geophysical Sciences
1967 B.S. Oregon State University – Physics (Highest Honors)

Professional Positions

2015 – Professor Emeritus, Department of Atmospheric Science Colorado State University
2007 – 2011 Head, Department of Atmospheric Science, Colorado State University
1986 – 2015 Professor of Atmospheric Sciences, Colorado State University
1982 – 1986 Associate Professor of Atmospheric Sciences, Colorado State University
1980 – 1982 Assistant Professor of Atmospheric Sciences, Colorado State University
1977 – 1979 Assistant Professor, University of Wisconsin-Milwaukee
1976 – 1977 Research Meteorologist, National Hurricane and Experimental Meteorology Lab., Miami
1972 – 1975 Research Assistant, University of Washington
1970 – 1972 Navy Weather Officer, Naval Weather Service, JTWC, Guam

Honors and Awards

2013 American Meteorological Society *Verner E. Suomi* Award
2012 Elected Councilor, American Meteorological Society
2004 CSU Department of Atmospheric Science *Professor of the Year* Award
2003 *NSF Special Creativity Award*
2000 CSU College of Engineering *Abell Faculty Research Award*
1994 American Meteorological Society (AMS) Fellow

Board, Panels, and Committees

2012 – 2015 Council, American Meteorological Society
2011 – 2013 American Meteorological Society Nominating Committee
2010 – 2011 External Review Panel, Department of Atmospheric and Oceanic Sciences, UCLA
2010 – 2011 NSF NCAR Scientific Programs Evaluation Committee (SPEC)
2010 – 2011 Search Committee, NCAR Earth System Laboratory Director
2010 – 2011 Chair, External Review Panel, Department of Meteorology, Naval Postgraduate School, Monterey, CA
2009 – 2010 National Severe Storms Laboratory Review Panel
2009 – 2017 Executive Committee, Monsoon Panel, WWRP, WMO
2008 – 2012 Dynamics of the MJO Experiment, Indian Ocean, DYNAMO (Science Steering Committee)
2007 – 2009 YOTC (Year of Tropical Convection) Science Panel
2007 – 2008 Co-Chair, Expert Team, Severe Monsoon Weather, WWRP, WMO
2005 – 2006 CLIVAR Process Study and Model Improvement Panel
2005 – 2006 Co-Chair, WMONEX25+, Kuala Lumpur
2005 – 2008 NCAR/RAL Advisory Panel, Member
2005 – 2008 NOAA CPPA Science Panel, Member
2004 NCAR Advisory Panel on Water Cycle Research, Member
2004 International Committee, IWM-III WMO Workshop on Monsoons
2003 – 2006 NAME Science Working Group
2003 – 2004 NCAR/MMM Director Search Committee
2003 – 2007 AMS Committee on Annual Meetings (Chair, 2006-2007)

2003 – 2005 CLIVAR Science Steering Committee
 2002 – 2004 NCAR/RAP Advisory Panel, Member
 2003 AMS Committee on Fellowship and Scholarships
 2002 Organizer of the Richard Reed Symposium at the AMS Annual Meeting
 2001 Chair, NSF Review Panel for MMM/NCAR
 2000 – 2001 CLIVAR Pacific Implementation Panel
 2000 – 2001 SPARC Water Vapor-Assessment Review Panel
 2000 SCSMEX Science Organizing Committee
 1998 – 1999 CSU College of Engineering Dean Search Committee
 1997 – 2001 International Science Organizing Committee, SCSMEX
 1996 – 1999 CLIVAR Monsoon Panel
 1995 – 1996 USWRP Science Advisory Committee
 1994 – 1997 GEWEX GCSS Working Group
 1994 – 1996 COMET Module Science Review Team
 1994 – 1996 AMS Committee on Mesoscale Processes
 1993 – 1996 TOGA COARE Scientific Working Group
 1992 – 1997 UCAR Board of Trustees
 1991 Scientific Steering Group, TAMEX Forecast Exercise
 1988 AMS Nominating Committee
 1987 – 1990 UCAR University Relations Committee
 1986 – 1987 Search Committee, NCAR Director of Mesoscale and Microscale Meteorology
 1985 – 1987 Experimental Design Committee, TAMEX
 1985 – 1990 Boundary Layer and Surface Processes Working Group, STORM Program
 1984 – 1987 UCAR University Relations Committee
 1984 – 1985 Scientific Steering Committee, Oklahoma-Kansas PRE STORM
 1983 – 1986 Member, Precipitation Committee of the Hydrology Section of the American Geophysical Union
 1983 – 1987 Task Leader, Monsoon Prediction, INDO-U.S. Science and Technology Cooperative Agreement

Journal Articles

2017

- Ciesielski, P. E., R. H. Johnson, X. Jiang, Y. Zhang, and S. Xie, 2017: Relationships between radiation, clouds, and convection during DYNAMO. *J. Geophys. Res. Atmos.*, **122**, 2529–2548, doi:10.1002/2016JD025965.
- Johnson, R. H., and P. E. Ciesielski, 2017: Multiscale variability of the atmospheric boundary layer during DYNAMO. *J. Atmos. Sci.* (submitted)
- Luo, Y., ... , R. Johnson, and others, 2017: The Southern China Monsoon Rainfall Experiment (SCMREX). *Bull. Amer. Met. Soc.*, **98**, 999–1013.
- Sjoberg, J. P., T. Birner, and R. H. Johnson, 2017: Intraseasonal to interannual variability of Kelvin wave momentum fluxes as derived from high-resolution radiosonde data. *Atmos. Chem. Phys.*, **17**, 8971–8986.

2016

- Fine, C. M., R. H. Johnson, P. E. Ciesielski, and R. K. Taft, 2016: The role of topographically induced vortices in tropical cyclone formation over the Indian Ocean. *Mon. Wea. Rev.*, **144**, 4827–4847.
- Johnson, R. H., P. E. Ciesielski, and T. M. Rickenbach, 2016: A further look at Q1 and Q2 from TOGA COARE. *Multiscale Convection-Coupled Systems in the Tropics: A tribute to Dr. Michio Yanai*, Chap. 1, *Meteorological Monographs*, **56**, 1.1–1.12.
- Ruppert Jr., J. H., and R. H. Johnson, 2016: On the cumulus diurnal cycle over the tropical warm pool. *J. Adv. Model. Earth Syst.*, **08**, doi:10.1002/2015MS000610.

Tao, W.-K., ... , P. E. Ciesielski, R. H. Johnson, and others, 2016: TRMM latent heating retrieval: Applications and comparisons with field campaigns and large-scale analyses. *Multiscale Convection-Coupled Systems in the Tropics: A tribute to Dr. Michio Yanai*, Chap. 2, *Meteorological Monographs*, **56**, 2.1-2.34.

2015

Gochis, D., ... , R. H. Johnson, and others, 2015: The great Colorado flood of September 2015. *Bull. Amer. Met. Soc.*, **96**, 1461-1487.

Johnson, R. H., P. E. Ciesielski, J. H. Ruppert, Jr., and M. Katsumata, 2015: Sounding-based thermodynamic budgets for DYNAMO. *J. Atmos. Sci.*, **72**, 598-622.

Oh, J.-H., X. Jiang, D. E. Waliser, M. W. Moncrieff, and R. H. Johnson, 2015: Convective momentum transport associated with the Madden-Julian Oscillation on a reanalysis dataset. *J. Climate*, **28**, 5763-5782.

Oh, J.-H., X. Jiang, D. E. Waliser, M. W. Moncrieff, R. H. Johnson, and P. E. Ciesielski, 2015: A momentum budget analysis of westerly wind events associated with the Madden-Julian Oscillation. *J. Atmos. Sci.*, **72**, 3780-3799.

Ruppert, J. H., Jr., and R. H. Johnson, 2015: Diurnally modulated cumulus moistening in the pre-onset stage of the Madden-Julian Oscillation during DYNAMO. *J. Atmos. Sci.*, **72**, 1622-1647.

Wang, C.-C., H.-C. Kuo, R. H. Johnson, C.-Y. Lee, S.-Y. Huang, and Y.-H. Chen, 2015: A numerical study of convection in rainbands of Typhoon Morakot (2009) with extreme rainfall: roles of pressure perturbations with low-level wind maxima. *Atmos. Chem. Phys. Discuss.*, **15**, 8479-8523.

2014

Ciesielski, P. E., R. H. Johnson, K. Yoneyama, and R. K. Taft, 2014: Mitigation of Sri Lanka island effects in Colombo sounding data and its impact on DYNAMO analyses. *J. Meteor. Soc. of Japan*, **92**, 385-405.

Ciesielski, P. E., H. Yu, R. H. Johnson, K. Yoneyama, M. Katsumata, C. N. Long, J. Wang, S. M. Loehrer, K. Young, S. F. Williams, W. Brown, J. Braun, and T. Van Hove, 2014: Quality-controlled upper-air sounding dataset for DYNAMO/CINDY/AMIE: Development and corrections. *J. Atmos. Ocean. Tech.*, **31**, 741-764.

Johnson, R. H., R. S. Schumacher, J. H. Ruppert, Jr., D. T. Lindsey, J. E. Ruthford, and L. Kriederman, 2014: The role of convective outflow in the Waldo Canyon Fire. *Mon. Wea. Rev.*, **142**, 3061-3080.

Moum, J. N., S. P. de Szoeke, W. D. Smyth, J. B. Edson, H. L. DeWitt, A. J. Moulin, E. J. Thompson, C. J. Zappa, S. A. Rutledge, R. H. Johnson, and C. W. Fairall, 2014: Air-sea interactions from westerly wind bursts during the November 2011 MJO in the Indian Ocean. *Bull. Amer. Met. Soc.*, **95**, 1185-1199.

Toy, M. D., and R. H. Johnson, 2014: The influence of an SST front on a heavy rainfall event over coastal Taiwan during TiMREX. *J. Atmos. Sci.*, **71**, 3223-3249.

2013

Adams-Selin, R. D., S. C. van den Heever, and R. H. Johnson, 2013: Impact of graupel class in microphysics parameterizations on bow echo simulations. *Mon. Wea. Rev.*, **141**, 1241-1262.

Adams-Selin, R. D., S. C. van den Heever, and R. H. Johnson, 2013: Sensitivity of bow echo simulation to microphysical parameterizations. *Wea. Forecasting*, **28**, 1188-1209.

Adams-Selin, R. D., and R. H. Johnson, 2013: Examination of gravity waves associated with 13 March 2003 bow echo. *Mon. Wea. Rev.*, **141**, 3735-3756.

Johnson, R. H., and P. E. Ciesielski, 2013: Structure and properties of Madden-Julian oscillations deduced from DYNAMO sounding arrays. *J. Atmos. Sci.*, **70**, 3157-3179.

Newman, A. J., and R. H. Johnson, 2013: Dynamics of a simulated North American monsoon gulf surge event. *Mon. Wea. Rev.*, **141**, 3238-3253.

Ruppert, J. H., Jr., R. H. Johnson, and A. K. Rowe, 2013: Diurnal circulations and rainfall in Taiwan during SoWMEX/TiMREX (2008). *Mon. Wea. Rev.*, **141**, 3851-3872.

2012

Ciesielski, P. E., P. T. Haertel, R. H. Johnson, B. J. Wang, and S. M. Loehrer, 2012: Developing high-quality field program sounding datasets. *Bull. Amer. Met. Soc.*, **93**, 325-336.

Johnson, R. H., S. F. Williams, and P. E. Ciesielski, 2012: Legacy atmospheric sounding data set project. *Bull. Amer. Met. Soc.*, **93**, 14-17.

Luo, Z. J., D. Kley, R. H. Johnson, G. Y. Liu, S. Nawrath, and H. G. J. Smit, 2012: Influence of sea surface temperature on humidity and temperature in the outflow of tropical deep convection. *J. Climate*, **25**, 1340-1348.

Newman, A., and R. H. Johnson, 2012: Mechanisms for precipitation enhancement in a North American monsoon upper-tropospheric trough. *J. Atmos. Sci.*, **69**, 1775-1792.

Newman, A., and R. H. Johnson, 2012: Simulation of a North American monsoon gulf surge event and comparison to observations. *Mon. Wea. Rev.*, **140**, 2534-2554.

Waliser, D. E., M. Moncrieff, D. Burridge, A. Fink, D. Gochis, B. N. Goswami, B. Guan, P. Harr, J. Heming, H.-H. Hsu, C. Jakob, M. Janiga, R. H. Johnson, S. Jones, P. Knippertz, J. Marengo, H. Nguyen, M. Pope, Y. Serra, C. Thorncroft, M. Wheeler, R. Wood, and S. Yuter, 2012: The "Year" of Tropical Convection (May 2008 to April 2010): Climate variability and weather highlights. *Bull. Amer. Met. Soc.*, **93**, 1198-1218.

2011

Chang, C.-P., N.-C. Lau, R. H. Johnson, and M. Jiao, 2011: Bridging weather and climate in research and forecasts of the global monsoon system. *Bull. Amer. Met. Soc.*, **92**, 369-373.

Katsumata, M., P. E. Ciesielski, and R. H. Johnson, 2011: Evaluation of budget analysis during MISMO. *J. Appl. Meteor. Clim.*, **50**, 241-254.

2010

Adams-Selin, R. D., and R. H. Johnson, 2010: Mesoscale surface pressure and temperature features associated with bow echoes. *Mon. Wea. Rev.*, **138**, 212-227.

Ciesielski, P. E., W.-M. Chang, S.-C. Huang, R. H. Johnson, B. Jong-Dao Jou, W.-C. Lee, P.-H. Lin, C.-H. Liu, and J. Wang, 2010: Quality controlled upper-air sounding dataset for TiMREX/SoWMEX: Development and corrections. *J. Atmos. Ocean. Tech.*, **27**, 1802-1821.

Finch, Z. O., and R. H. Johnson, 2010: Observational analysis of an upper-level inverted trough during the 2004 North American Monsoon Experiment. *Mon. Wea. Rev.*, **138**, 3540-3555.

James, E. P., and R. H. Johnson, 2010: A climatology of midlatitude mesoscale convective vortices in the Rapid Update Cycle. *Mon. Wea. Rev.*, **138**, 1940-1956.

James, E. P., and R. H. Johnson, 2010: Patterns of precipitation and surface pressure evolution in midlatitude mesoscale convective vortices. *Mon. Wea. Rev.*, **138**, 909-931.

Johnson, R. H., P. E. Ciesielski, T. S. L'Ecuyer, and A. J. Newman, 2010: Diurnal cycle of convection during the 2004 North American Monsoon Experiment. *J. Climate*, **23**, 1060-1078.

2009

Ciesielski, P. E., and R. H. Johnson, 2009: Atmospheric mixed layers over the South China Sea during SCSMEX. *SOLA*, **5**, 29-32.

Ciesielski, P. E., R. H. Johnson, and J. Wang, 2009: Correction of humidity biases in Vaisala RS80-H sondes during NAME. *J. Atmos. Oceanic Technol.*, **26**, 1763-1780.

Katsumata, M., R. H. Johnson, and P. E. Ciesielski, 2009: Observed synoptic-scale variability during the developing phase of an ISO over the Indian Ocean during MISMO. *J. Atmos. Sci.*, **66**, 3434-3448.

Luo, Z., G. Liu, G. L. Stephens, and R. H. Johnson, 2009: Terminal vs transient cumulus congestus: a Cloudsat perspective. *Geophys. Res. Lett.*, **36**, L05808, doi:10.1029/2008GL036927.

Schumacher, R. S., and R. H. Johnson, 2009: Quasi-stationary, extreme-rain-producing convective systems associated with midlevel cyclonic circulations. *Wea. Forecasting*, **24**, 555-574.

2008

Aves, S. L., and R. H. Johnson, 2008: The diurnal cycle of convection over the northern South China Sea. *J. Meteor. Soc. Japan*, **86**, 919-934.

Ciesielski, P. E., and R. H. Johnson, 2008: Diurnal cycle of surface flows during 2004 NAME and comparison to model reanalysis. *J. Climate*, **21**, 3890-3913.

Luo, Z., D. Kley, R. H. Johnson and H. Smit, 2008: Ten years of measurements of tropical upper-tropospheric water vapor by MOZAIC, Part II: Accessing the ECMWF humidity analysis. *J. Climate*, **21**, 1449-1446.

Martin, E. R., and R. H. Johnson, 2008: An observational and modeling study of an atmospheric internal bore during NAME 2004. *Mon. Wea. Rev.*, **136**, 4150-4167.

Schumacher, R.S., and R.H. Johnson, 2008: Mesoscale processes contributing to extreme rainfall in a midlatitude warm-season flash flood. *Mon. Wea. Rev.*, **136**, 3964-3986.

2007

Johnson, R. H., and C.-P. Chang, 2007: Winter MONEX: A Quarter-Century and Beyond. *Bull. Amer. Met. Soc.*, **88**, 385-388.

Johnson, R. H., P. E. Ciesielski, B. D. McNoldy, P. J. Rogers, and R. K. Taft, 2007: Multiscale variability of the flow during the North American Monsoon Experiment. *J. Climate*, **20**, 1628-1648.

Kley, D., H. G. J. Smit, S. Nawrath, Z. Luo, P. Nedelec and R. H. Johnson, 2007: Tropical Atlantic convection as revealed by ozone and relative humidity measurements. *J. Geophys. Res.*, **112**, D23109, doi: 10.1029/2007JD008599.

Luo, Z., D. Kley, R. H. Johnson, and H. Smit, 2007: Ten years of measurements of tropical upper-tropospheric water vapor by MOZAIC, Part I: Climatology, variability, transport, and relation to deep convection. *J. Climate*, **20**, 418-435.

Rogers, P. J., and R. H. Johnson, 2007: Analysis of the 13-14 July gulf surge event during the 2004 North American Monsoon Experiment. *Mon. Wea. Rev.*, **135**, 3098-3117.

2006

Ciesielski, P. E., and R. H. Johnson, 2006: Contrasting characteristics of convection over the northern and southern South China Sea during SCSMEX. *Mon. Wea. Rev.*, **134**, 1041-1062.

Higgins, W., et al., 2006: The North American Monsoon Experiment (NAME) 2004 field campaign and modeling strategy. *Bull. Amer. Met. Soc.*, **87**, 79-94.

Schumacher, R. S., and R. H. Johnson, 2006: Characteristics of United States extreme rain events during 1999-2003. *Wea. Forecasting*, **21**, 69-85.

2005

Johnson, R. H., S. A. Aves, P. E. Ciesielski, and T. D. Keenan, 2005: Organization of oceanic convection during the onset of the 1998 East Asian Summer Monsoon. *Mon. Wea. Rev.*, **133**, 131-148.

Schumacher, R. S., and R. H. Johnson, 2005: Organization and environmental properties of extreme-rain-producing mesoscale convective systems. *Mon. Wea. Rev.*, **133**, 961-976.

2004

- Bordoni, S., P. E. Ciesielski, R. H. Johnson, B. D. McNoldy, and B. Stevens, 2004: The low-level circulation of the North American Monsoon as revealed by QuikSCAT. *Geo. Res. Let.*, **31**, L10109, doi:10.1029/2004GL020009.
- McNoldy, B. D., P. E. Ciesielski, W. H. Schubert, and R. H. Johnson, 2004: Surface winds, divergence, and vorticity in stratocumulus regions using QuikSCAT and reanalysis winds. *Geo. Res. Let.*, **31**, L08105, doi:10.1029/2004GL019768.
- Parker, M. D., and R. H. Johnson, 2004: Structures and dynamics of quasi-2D mesoscale convective systems. *J. Atmos. Sci.*, **61**, 545-567.
- Parker, M. D., and R. H. Johnson, 2004: Simulated convective lines with leading precipitation. Part I: Governing dynamics. *J. Atmos. Sci.*, **61**, 1637-1655.
- Parker, M. D., and R. H. Johnson, 2004: Simulated convective lines with leading precipitation. Part II: Evolution and maintenance. *J. Atmos. Sci.*, **61**, 1656-1673.
- Stephens, G. L., P. J. Webster, R. H. Johnson, R. Engelen, and T. L'Ecuyer, 2004: Observational evidence for the mutual regulation of the tropical hydrological cycle and tropical sea surface temperatures. *J. Climate*, **17**, 2213-2224.

2003

- Ciesielski, P. E., R. H. Johnson, P. T. Haertel and J. Wang, 2003: Corrected TOGA COARE sounding humidity data: Impact on diagnosed properties of convection and climate over the warm pool. *J. Climate*, **16**, 2370-2384.
- Kniviel, J. C., and R. H. Johnson, 2003: A scale-discriminating vorticity budget for a mesoscale vortex in a midlatitude, continental mesoscale convective system. *J. Atmos. Sci.*, **60**, 781-794.
- Mapes, B. E., P. E. Ciesielski, and R. H. Johnson, 2003: Sampling errors in rawinsonde-array budgets. *J. Atmos. Sci.*, **60**, 2697-2714.
- Pettet, C. R., and R. H. Johnson, 2003: Airflow and precipitation structure of two leading stratiform mesoscale convective systems determined from operational datasets. *Wx. Forecasting*, **18**, 685-699.
- Tao, W.-K., C.-L. Shie, D. Johnson, J. Simpson, S. Braun, R. H. Johnson, and P. E. Ciesielski, 2003: Convective systems over the South China Sea: Cloud-resolving model simulations. *J. Atmos. Sci.*, **60**, 2929-2956.

2002

- Johnson, R. H. and P. E. Ciesielski, 2002: Characteristics of the 1998 summer monsoon onset over the Northern South China Sea. *J. Meteor. Soc. of Japan*, **80**, 561-578.
- Kniviel, J. C. and R. H. Johnson, 2002: The kinematics of a midlatitude continental mesoscale convective system and its mesoscale vortex. *Mon. Wea. Rev.*, **130**, 1749-1770.

2001

- Ciesielski, P. E., W. H. Schubert, and R. H. Johnson, 2001: Diurnal variability of the marine boundary layer during ASTEX. *J. Atmos. Sci.*, **58**, 2355-2376.
- Haertel, P. T., R. H. Johnson, and S. N. Tulich, 2001: Some simple simulations of thunderstorm outflows. *J. Atmos. Sci.*, **58**, 504-516.
- Johnson, R. H., 2001: Surface mesohighs and mesolows. *Bull. Amer. Meteor. Soc.* (Special Issue honoring Tetsuya Fujita), **82**, 13-31.
- Johnson, R. H., P. E. Ciesielski, and J. A. Cotturone, 2001: Multiscale variability of the atmospheric mixed-layer over the Western Pacific warm pool. *J. Atmos. Sci.*, **58**, 2729-2750.

Parker, M. D., S. A. Rutledge, and R. H. Johnson, 2001: Cloud-to-ground lighting in linear mesoscale convective systems with leading and parallel stratiform precipitation. *Mon. Wea. Rev.*, **129**, 1232-1242.

2000

Haertel, P. T., and R. H. Johnson, 2000: The linear dynamics of squall-line mesohighs and wake lows. *J. Atmos. Sci.*, **57**, 93-107.

Johnson, R. H., and P. E. Ciesielski, 2000: Rainfall and radiative heating rate estimates from TOGA-COARE atmospheric budgets. *J. Atmos. Sci.*, **57**, 1497-1514.

Lau, K. M., Y. Ding, J. -T. Wang, R. Johnson, T. Keenan, R. Cifelli, J. Gerlach, O. Thiele, T. Rickenbach, S.-C. Tsay, and P.-H. Lin, 2000: A report of the field operations and early results of the South China Sea Monsoon Experiment (SCSMEX). *Bull. Amer. Meteor. Soc.*, **81**, 1261-1270.

Parker, M. D., and R. H. Johnson, 2000: Organizational modes of midlatitude mesoscale convective systems. *Mon. Wea. Rev.*, **128**, 3413-3436.

1999

Ciesielski, P. E. W. H. Schubert, and R. H. Johnson, 1999: Large-scale heat and moisture budgets over ASTEX Region. *J. Atmos. Sci.*, **56**, 3241-3261.

Johnson, R. H., T. M. Rickenbach, S. A. Rutledge, P. E. Ciesielski, and W. H. Schubert, 1999: Trimodal characteristics of tropical convection. *J. Climate*, **12**, 2397-2418.

Petersen, W. A., L. D. Carey, S. A. Rutledge, J. C. Knievel, N. J. Doesken, R. H. Johnson, T. B. McKee, T. VonderHaar, and J. F. Weaver, 1999: Mesoscale and radar observations of the Fort Collins flash flood of 28 July 1997. *Bull. Amer. Met. Soc.*, **80**, 191-216.

1998

Godfrey, J. S., R. A. Houze, Jr., R. H. Johnson, R. Lukas, J.-L. Redelsperger, A. Sumi and R. Weller, 1998: Coupled Ocean-Atmosphere Response experiment (COARE): An interim report. *J. Geophys. Res.*, **103**, 14395-14450.

Haertel, P. T., and R. H. Johnson, 1998: Two-day disturbances in the Equatorial Western Pacific. *Quart. J. Roy. Meteor. Soc.*, **124**, 615-636.

Hilgendorf, E. R., and R. H. Johnson, 1998: A Study of the evolution of mesoscale convective systems using WSR-88D data. *Wea. Forecasting*, **13**, 437-452.

Knievel, J. C., and R. H. Johnson, 1998: Pressure transients within MCS mesohighs and wake lows. *Mon. Wea. Rev.*, **126**, 1907-1930.

1997

Ciesielski, P. E., L. Hartten and R. H. Johnson, 1997: Impacts of merging profiler and rawinsonde winds on TOGA COARE analyses. *J. Atmos. Oceanic Tech.*, **14**, 1264-1279.

Johnson, R. H., and X. Lin, 1997: Episodic Trade-Wind Regimes over the Western Pacific Warm Pool. *J. Atmos. Sci.* **54**, 2020-2034.

1996

Johnson, R.H., P.E. Ciesielski and K.A. Hart, 1996: Tropical inversions near the 0C level. *J. Atmos. Sci.*, **53**, 1838-1855.

Lin, X., and R. H. Johnson, 1996: Kinematic and thermodynamic characteristics of the flow over the western pacific warm pool during TOGA/COARE. *J. Atmos. Sci.*, **53**, 695-715.

Lin, X., and R. H. Johnson, 1996: Heating, moistening and rainfall over the western Pacific warm pool during TOGA COARE. *J. Atmos. Sci.*, **53**, 3367-3383.

1995

- Gallus, W. A., Jr., and R. H. Johnson, 1995: The dynamics of circulations within the trailing stratiform regions of squall lines: Part I: The 10-11 June PRE-STORM system. *J. Atmos. Sci.*, **52**, 2161-2187.
- Gallus, W. A., Jr., and R. H. Johnson, 1995: The dynamics of circulations within the trailing stratiform regions of squall lines: Part II: Influence of the convective line and ambient environment. *J. Atmos. Sci.*, **52**, 2188-2211.
- Johnson, R. H., B. D. Miner, and P. E. Ciesielski, 1995: Circulations between mesoscale convective systems along a cold front. *Mon. Wea. Rev.*, **123**, 585-599.
- Loehrer, S. M., and R. H. Johnson, 1995: Surface pressure and precipitation life cycle characteristics of PRE-STORM mesoscale convective systems. *Mon. Wea. Rev.*, **123**, 600-621.
- Schubert, W. H., P. E. Ciesielski, C. Lu and R. H. Johnson, 1995: Dynamical adjustment of the trade wind inversion layer. *J. Atmos. Sci.*, **52**, 2941-2952.

1994

- Bernstein, B. C., and R. H. Johnson, 1994: A dual-Doppler radar study of an OK PRE-STORM heat burst event. *Mon. Wea. Rev.*, **122**, 259-273.
- Lin, X., and R. H. Johnson, 1994: Heat and moisture budgets and circulation characteristics of a frontal squall line. *J. Atmos. Sci.*, **51**, 1661-1681.

1993

- Johnson, R. H., Z. Wang, and J. F. Bresch, 1993: Heat and moisture budgets over China during the early summer monsoon. *J. Meteor. Soc. Japan*, **71**, 137-152.

1992

- Gallus, W. A., Jr., and R. H. Johnson, 1992: The momentum budget of an intense midlatitude squall line. *J. Atmos. Sci.*, **49**, 422-450.
- Johnson, R. H., 1992: Heat and moisture sources and sinks of Asian monsoon precipitating systems. *J. Meteor. Soc. Japan*, **70**, 353-372.
- Johnson, R. H., and D. L. Bartels, 1992: Circulations associated with a mature-to-decaying midlatitude mesoscale convective system. Part II: Upper-level features. *Mon. Wea. Rev.*, **120**, 1301-1320.
- Vescio, M. D., and R. H. Johnson, 1992: The wind response to transient mesoscale pressure fields associated with squall lines. *Mon. Wea. Rev.*, **120**, 1837-1850.

1991

- Gallus, W. A., Jr., and R. H. Johnson, 1991: Heat and moisture budgets of an intense midlatitude squall line. *J. Atmos. Sci.*, **48**, 122-146.
- Johnson, R. H., and J. F. Bresch, 1991: Diagnosed characteristics of Mei-Yu precipitation systems over Taiwan during the May-June 1987 TAMEX. *Mon. Wea. Rev.*, **119**, 2540-2557.
- Stumpf, G. J., R. H. Johnson, and B. F. Smull, 1991: The wake low in a midlatitude mesoscale convective system having complex convective organization. *Mon. Wea. Rev.*, **119**, 134-158.

1990

- Johnson, R. H., W. A. Gallus Jr., and M. D. Vescio, 1990: Near-tropopause vertical motion within the trailing stratiform region of a midlatitude squall line. *J. Atmos. Sci.*, **47**, 2200-2210.

1989

- Ciesielski, P. E., D. E. Stevens, R. H. Johnson and K. R. Dean, 1989: Observational evidence for asymmetric inertial instability. *J. Atmos. Sci.*, **46**, 817-831.

Johnson, R. H., and W. H. Schubert, 1989: Publication trends in American Meteorological Society technical journals. *Bull. Amer. Meteor. Soc.*, **70**, 476-479.

Johnson, R. H., S. Chen, and J. J. Toth, 1989: Circulations associated with a mature-to-decaying midlatitude mesoscale convective system. Part I: Surface features - heat bursts and mesolow development. *Mon. Wea. Rev.*, **117**, 942-959.

1988

Johnson, R. H., and P. J. Hamilton, 1988: The relationship of surface pressure features to the precipitation and air flow structure of an intense midlatitude squall line. *Mon. Wea. Rev.* **116**, 1444-1472.

Nicholls, M. E., R. H. Johnson, and W. R. Cotton, 1988: The sensitivity of two-dimensional simulations of tropical squall lines to environmental profiles. *J. Atmos. Sci.*, **45**, 3625-3649.

1986

Johnson, R. H., 1986: Lower-tropospheric warming and drying in tropical mesoscale convective systems: Implications for the problem of cumulus parameterization. *J. Meteor. Soc. Japan*, **64**, 721-726.

Johnson, R. H., 1986: Short-term variations of the tropopause height over the Winter MONEX area. *J. Atmos. Sci.*, **43**, 1152-1163.

Johnson, R. H., and J. R. Zimmerman, 1986: Modification of the boundary layer over the South China Sea during a Winter MONEX cold surge event. *Mon. Wea. Rev.*, **114**, 2004-2015.

1985

Toth, J. J., and R. H. Johnson, 1985: Summer surface flow characteristics over northeast Colorado. *Mon. Wea. Rev.*, **113**, 1458-1469.

1984

Gupta, V. K., H. R. Cho, E. Johnson, R. H. Johnson, M. L. Kavvas, C. A. Leary, A. Murphy, M. Puri, J. Smith and E. Waymire, 1984: A new interdisciplinary focus for precipitation research. *Transactions, Amer. Geophys. Union*, **65**, 377-380.

Johnson, R. H., 1984: Partitioning tropical heat and moisture budgets into cumulus and mesoscale components: Implications for cumulus parameterization. *Mon. Wea. Rev.*, **112**, 1590-1601.

Johnson, R. H., G. S. Young, J. J. Toth and R. M. Zehr, 1984: A study of mesoscale weather effects of variable snow cover over northeast Colorado. *Mon. Wea. Rev.*, **112**, 1141-1151.

Nicholls, M. E. and R. H. Johnson, 1984: A model of a tropical squall line boundary layer wake. *J. Atmos. Sci.*, **41**, 2774-2792.

Young, G. S., and R. H. Johnson, 1984: Meso- and microscale features of a Colorado cold front. *J. Clim. and Appl. Meteor.*, **23**, 1315-1325.

1983

Johnson, R. H., and M. E. Nicholls, 1983: A composite analysis of the boundary layer accompanying a tropical squall line. *Mon. Wea. Rev.*, **111**, 308-319.

Johnson, R. H., and G. S. Young, 1983: Heat and moisture budgets of tropical mesoscale anvil clouds. *J. Atmos. Sci.*, **40**, 2138-2147.

1982

Johnson, R. H., 1982: Vertical motion in near-equatorial winter monsoon convection. *J. Meteor. Soc. Japan*, **60**, 682-690.

Johnson, R. H., 1982: Comments on "An analysis of diagnostic cloud mass flux models". *J. Atmos. Sci.*, **39**, 2099-2100.

Johnson, R. H., and D. C. Kriete, 1982: Thermodynamic and circulation characteristics of winter monsoon tropical mesoscale convection. *Mon. Wea. Rev.*, **110**, 1898-1911.

1981

Johnson, R. H., 1981: Large-scale effects of deep convection on the GATE tropical boundary layer. *J. Atmos. Sci.*, **38**, 2399-2413.

Johnson, R. H., and D. L. Priegnitz, 1981: Winter monsoon convection in the vicinity of north Borneo, Part II: Effects on large-scale fields. *Mon. Wea. Rev.*, **109**, 1615-1628.

1980

Johnson, R. H., 1980: Diagnosis of convective and mesoscale motions during Phase III of GATE. *J. Atmos. Sci.*, **37**, 733-753.

1978

Johnson, R. H., 1978: Cumulus transports in a tropical wave composite for Phase III of GATE. *J. Atmos. Sci.*, **35**, 484-494.

Johnson, R. H., 1978: Characteristic structure and growth of the nonprecipitating cumulus layer over south Florida. *Mon. Wea. Rev.*, **106**, 1495-1504.

1977

Johnson, R. H., 1977: Effects of cloud detrainment on the diagnosed properties of cumulus populations. *J. Atmos. Sci.*, **34**, 359-366.

Johnson, R. H., 1977: Effects of cumulus convection the structure and growth of the mixed layer over south Florida. *Mon. Wea. Rev.*, **105**, 713-724.

1976

Johnson, R. H., 1976: The role of convective-scale precipitation downdrafts in cumulus and synoptic-scale interactions. *J. Atmos. Sci.*, **33**, 1890-1910.

1974

Reed, R. J. and R. H. Johnson, 1974: The vorticity budget of synoptic scale wave disturbances in the tropical western Pacific. *J. Atmos. Sci.*, **31**, 1784-1790.

1967

Hutcheon, R. J., R. H. Johnson, W. P. Lowry, C. H. Black and D. Hadley, 1967: Observations of the urban heat island in a small city. *Bull. Amer. Met. Soc.*, **48**, 7-9.

Graduate Students Advised

Ph.D.

Ruppert, J. H., Jr.	2015	Cumulus Moistening, the Diurnal Cycle, and Large-Scale Tropical Dynamics
Adams-Selin, R. D.	2012	Gravity Wave and Microphysical Effects on Bow Echo Development
Newman, A. J.	2011	Aspects of Gulf Surges and Tropical Upper Tropospheric Troughs in the North American Monsoon
Lindsey, D. T.	2008	A Study of the Relationship Between Thunderstorm Processes and Cloud-Top Ice Crystal Size
Schumacher, R. S.	2008	Quasi-Stationary, Extreme-Rain-Producing Convective Systems Associated With Midlevel Cyclonic Circulations
Kniewel, J. C.	2001	The Kinematics and Thermodynamics of a Midlatitude, Continental

		Mesoscale Convective System and Its Mesoscale Vortex
Parker, M. D.	2001	Quasi Two-Dimensional Convective Lines with Leading Precipitation: Dynamics Inferred from Idealized Numerical Simulations
Haertel, P. T.	1998	The Dynamics of MCS Mesohighs and Wake Lows
Lin, X.	1997	Multiscale Variability Associated with the Intraseasonal Oscillation Over the Western Pacific Warm Pool
Trier, S.	1997	Multiscale Analysis of a Simulated Oceanic Mesoscale Convective System and its Environmental Impact
Bresch, J. F.	1994	Numerical Simulation and Analysis of a Series of Mesoscale Convective Systems
Gallus, W. A.	1993	The Dynamics of Circulations Within the Stratiform Regions of Squall Lines
Nicholls, M.	1987	A Numerical Investigation of Tropical Squall Lines
Toth, J. J.	1987	Interaction of Shallow Cold Surges with Topography on Scales of 100-1000 km
Young, G. S.	1986	The Dynamics of Thermals and their Contribution to Mixed Layer Processes

M.S.

Fine, C. M.	2015	Wake Vortices and Tropical Cyclogenesis Downstream of Sumatra over the Indian Ocean
Dagg, E. L.	2015	Tropical Tropopause Variability Associated with the Madden-Julian Oscillation During DYNAMO
Davis, A. J.	2013	Kinematic Structures, Diabatic Profiles, and Precipitation Systems in West Africa During Summer 2006
Ruppert, J. H., Jr.	2012	Analysis of the Diurnal Cycle in Taiwan During the Terrain-influenced Monsoon Rainfall Experiment
Steinweg-Woods, J. M.	2010	Surface and Synoptic Features of Leading and Parallel Stratiform Mesoscale Convective Systems
Finch, Z. O.	2009	An Observational Study of Two Upper-Level Inverted Troughs During the 2004 North American Monsoon Experiment
Harrold, M. A.	2009	The Vorticity Structure of the 2-3 June 2003 MCS During BAMEX
James, E. P.	2009	An Observational Climatology of Midlatitude Mesoscale Convective Vortices
Adams-Selin, R. D.	2008	Investigation of Mesoscale Surface Pressure and Temperature Features Associated with Bow Echoes
Martin, E. R.	2007	An Observational and Modeling Study of an Atmospheric Internal Bore During NAME 2004
Aves, S. L.	2006	The Diurnal Cycle of Convection Over the Northern South China Sea During the South China Sea Monsoon Experiment
Quelet, P. T.	2006	Observed Radar and Environmental Properties of United States Warm Season Bowing Convective Systems, 2003-2004
Rogers, P. J.	2005	An Observational Analysis of Two Gulf Surge Events During the 2004 North American Monsoon Experiment
Schumacher, R. S.	2003	Climatological and Radar-Indicated Characteristics of United States Extreme Rain Events
Loechl, E.	2001	Intraseasonal Oscillations and the Southeast Asian Monsoon
McLeod, R.	2001	Analysis of the 1998 Southeast Asian Monsoon and the Diurnal Cycle in the South China Sea
Pettet, C.	2001	Airflow and Precipitation Structure of Two Leading Stratiform

Mesoscale Convective Systems

Parker, M. D.	1999	May 1996 and May 1997 Linear Mesoscale Convective Systems of the Central Plains: Synoptic Meteorology and a Reflectivity-Based Taxonomy
Kankiewicz, J. A.	1998	The Fine-Scale Characteristics of the 7-8 May 1995 Squall Line
Dickey, J. A.	1996	Analysis of the Atmospheric Mixed Layer over the Western Pacific Warm Pool
Hilgendorf, E. R.	1996	Evolution of Precipitation Structures Within Mesoscale Convective Systems
King, R. G.	1996	Mid-Level Vorticity in Mesoscale Convective Systems
Knievel, J. C.	1996	Surface Pressure Transients in Mesoscale Convective Systems
Haertel, P. T.	1995	Two-Day Disturbances in the Tropical Western Pacific
Hart, K. A.	1994	Water Vapor and Temperature Inversions Near the 0C Level Over the Tropical Western Pacific
Miner, B. D.	1993	Opposing Mesoscale Flows in a Broken Midlatitude Squall Line
Falvey, R. J.	1992	A Composite Study of the Madden-Julian Oscillation
Lin, X.	1992	A Diagnostic Study of a Midlatitude Frontal Squall Line
Loehrer, S. M.	1992	The Surface Pressure Features and Precipitation Structure of Pre-Storm Mesoscale Convective Systems
Orr, B. W.	1991	Boundary Layer Momentum Budgets as Determined from a Single Scanning Doppler Radar
Bernstein, B. C.	1990	Surface and Dual-Doppler Radar Analysis of 23-24 June 1985 OK PRE-STORM Heat Bursts
Vescio, M. D.	1990	The Wind's Response to Transient Mesoscale Pressure Fields Associated with Squall Lines
Gallus, W. A.	1989	The Heat, Moisture, and Momentum Budgets of a Midlatitude Squall Line with a Trailing Stratiform Region
Stumpf, G. J.	1988	Surface Pressure Features Associated with a Midlatitude Mesoscale Convective System in OK PRE-STORM
Hamilton, P. J.	1987	Observations of a Midlatitude Squall Line Boundary Layer Wake
Williams, G. M.	1986	Mesoscale Observations of a Lee Trough in Colorado
Wolfe, D. E.	1985	Early Morning Evolution of the Convective Boundary Layer at the Boulder Atmospheric Observatory
Nicholls, M.	1983	Observations and Modeling of the Boundary Layer Accompanying a Tropical Squall Line
Toth, J. J.	1983	An Observational Study of Summer Surface Wind Flow over Northeast Colorado