

Robert Johns Publications
List of science papers lead-authored or co-authored by Robert Johns

Formal Publications

These are formal, refereed papers which have appeared in or have been accepted to formal, refereed journals (e. g., AMS, EJSSM, NWA) and science books (e.g., Geophysical Monograph 79)

Johns, R. H., 1982: A synoptic climatology of northwest flow severe weather outbreaks. Part I: Nature and significance. *Mon. Wea. Rev.*, **110**, 1653-1663.

Johns, R. H., 1984: A synoptic climatology of northwest flow severe weather outbreaks. Part II: Meteorological parameters and synoptic patterns. *Mon. Wea. Rev.*, **112**, 449-464.

Johns, R. H., and W. D. Hirt, 1985: The derecho of 19-20 July 1983...a case study. *Natl. Wea. Dig.*, **10:3**, 17-32.

Johns, R. H., and W. D. Hirt, 1987: Derechos: widespread convectively induced windstorms. *Wea. Forecasting*, **2**, 32-49.

Johns, R. H., and C. A. Doswell III, 1992: Severe local storms forecasting. *Wea. Forecasting*, **7**, 588-612.

Johns, R. H., 1993: Meteorological conditions associated with bow echo development in convective storms. *Wea. Forecasting*, **8**, 294-299.

Davies, J. M., and R. H. Johns, 1993: Some wind and instability parameters associated with strong and violent tornadoes, 1. Wind shear and helicity. *The Tornado: Its Structure, Dynamics, Prediction, and Hazards*, Geophys. Monogr., No. 79, C. Church, D. Burgess, C. Doswell III, and R. Davies-Jones, Eds., Amer. Geophys. Union, Washington, DC, 573-582.

Doswell, C. A. III, S. J. Weiss, and R. H. Johns, 1993: Tornado forecasting: a review. *The Tornado: Its Structure, Dynamics, Prediction, and Hazards*, Geophys. Monogr., No. 79, C. Church, D. Burgess, C. Doswell III, and R. Davies-Jones, Eds., Amer. Geophys. Union, Washington, DC, 557-571.

Johns, R. H., J. M. Davies, and P. W. Leftwich, 1993: Some wind and instability parameters associated with strong and violent tornadoes, 2. Variations in the combinations of wind and instability parameters. *The Tornado: Its Structure, Dynamics, Prediction, and Hazards*, Geophys. Monogr., No. 79, C. Church, D. Burgess, C. Doswell III, and R. Davies-Jones, Eds., Amer. Geophys. Union, Washington, DC, 583-590.

Evenson, E. C., and R. H. Johns, 1995: Some climatological and synoptic aspects of severe weather development in the northwestern United States. *Natl. Wea. Dig.*, **20:1**, 34-50.

Johns, R. H., and R. A. Dorr, Jr., 1996: Some meteorological aspects of strong and violent tornado episodes in New England and eastern New York. *Natl. Wea. Dig.*, **20:4**, 2-12.

Davis, C., N. Atkins, D. Bartels, L. Bosart, M. Coniglio, G. Bryan, W. Cotton, D. Dowell, B. Jewett, R. Johns, D. Jorgensen, J. Knievel, K. Knupp, W-C Lee, G. Mcfarquhar, J. Moore, R. Przybylinski, R. Rauber, B. Smull, R. Trapp, S Trier, R. Wakimoto, M. Weisman, and C. Zeigler, 2004: The bow echo and MCV experiment: Observations and opportunities. *Bull. Amer. Meteor. Soc.*, **85**, 1075-1093.

Metz, N.D., D. M. Schultz, and R. H. Johns, 2004: Extratropical cyclones with multiple warm-front-like baroclinic zones and their relationship to severe convective storms. *Wea. Forecasting*, **19**, 907-916.

Van Den Broeke, M.S., D.M. Schultz, R.H. Johns, J.S. Evans, and J.E. Hales, 2005: Cloud-to-ground lightning production in strongly forced, low-instability convective lines associated with damaging wind. *Wea. Forecasting*, **20**, 517-530.

Punkka, A-J, J. Teittinen, and R. H. Johns, 2006: Synoptic and mesoscale analysis of a high-latitude derecho-severe thunderstorm outbreak in Finland on 5 July 2002. *Wea. Forecasting*, **21**, 752-763.

Sears-Collins, A. L., D. M. Schultz, and R. H. Johns, 2006: Spatial and temporal variability of nonfreezing drizzle in the United States and Canada. *Journal of Climate*, **19**, 3629-3639.

Horan, K. L., D. M. Schultz, J. E. Hales, Jr., S. F. Corifidi, and R. H. Johns, 2007: A five-year climatology of elevated severe convection storms in the United States east of the Rocky Mountains. *Wea. Forecasting*, **22**, 1031-1044.

Wasula, A.C., L. F. Bosart, R. S. Schneider, S. J. Weiss, R. H. Johns, G. S. Manikin, and P. Welsh, 2007: Mesoscale aspects of the rapid intensification of a tornadic convective line across central Florida: 22–23 February 1998. *Wea. Forecasting*, **22**, 223-243.

Formal Comments

Johns, R. H., and J. S. Evans, 2000: Comments on "A climatology of derecho-producing mesoscale convective systems in the central and eastern United States, 1986-1995. Part I: Temporal and spatial distribution". *Bull. Amer. Meteor. Soc.*, **81**, 1049-1054.

Conference Papers

These are informal research papers prepared for conferences of the American Meteorological Society, National Weather Association, or other professional organizations.

Johns, R. H., 1977: A climatology of northwest flow severe weather outbreaks. *Preprints*, 10th Conf. Severe Local Storms, Omaha, NE, Amer. Meteor. Soc., 174-179.

Johns, R. H., 1982: Severe weather occurring in areas of low surface dew points. *Preprints*, 12th Conf. Severe Local Storms, San Antonio, TX, Amer. Meteor. Soc., 143-146.

Johns, R. H., and W. D. Hirt, 1983: The derecho...a severe weather producing convective system. *Preprints*, 13th Conf. Severe Local Storms, Tulsa, OK, Amer. Meteor. Soc., 178-181.

Johns, R. H., and P. W. Leftwich, Jr., 1988: The severe thunderstorm outbreak of July 28-29, 1986: A case exhibiting both isolated supercells and a derecho producing convective system. *Preprints*, 15th Conf. Severe Local Storms, Baltimore, MD, Amer. Meteor. Soc., 448-451.

Johns, R. H., and W. R. Sammler, 1989: A preliminary synoptic climatology of violent tornado outbreaks utilizing radiosonde standard level data. *Preprints*, 12th Conf. Weather Analysis and Forecasting, Monterey, CA, Amer. Meteor. Soc., 196-201.

Johns, R. H., J. M. Davies, and P. W. Leftwich, 1990: An examination of the relationship of 0-2 km AGL "positive" wind shear to potential buoyant energy in strong and violent tornado situations. *Preprints*, 16th Conf. Severe Local Storms, Kananaskis Park, AB, Canada, Amer. Meteor. Soc., 593-598.

Johns, R. H., K. W. Howard, and R. A. Maddox, 1990: Conditions associated with long-lived derechos – An examination of the large-scale environment. *Preprints*, 16th Conf. Severe Local Storms, Kananaskis Park, AB, Canada, Amer. Meteor. Soc., 408-412.

Johns, R. H., and C. A. Doswell, III, 1992: Severe local storms forecasting. *Preprints*, Symp. on Weather Forecasting, Atlanta, GA, Amer. Meteor. Soc., 225-236.

Johns, R. H., and J. A. Hart, 1993: Differentiating between types of severe thunderstorm outbreaks: a preliminary investigation. *Preprints*, 17th Conf. Severe Local Storms, St. Louis, MO, Amer. Meteor. Soc., 46-50.

July, M. J., and R. H. Johns, 1993: Assessment of "High Risk" forecasts issued by the National Severe Storms Forecast Center in the 0700 UTC day-one convective outlook. *Preprints*, 17th Conf. Severe Local Storms, St. Louis, MO, Amer. Meteor. Soc., 133-137.

Evans, J. S., and R. H. Johns, 1995: Preliminary study of Wyoming mountain tornadoes. *Preprints*, 7th Conf. Mountain Meteorology, Breckenridge, CO, Amer. Meteor. Soc., 28-33.

Brooks, H. E., J. V. Cortinas, Jr., and R. H. Johns, 1996: Experimental winter hazards forecasting at the Storm Prediction Center: Verification results for probabilistic freezing rain forecasts. *Preprints*, 15th Conf. Weather Analysis and Forecasting, Norfolk, VA, Amer. Meteor. Soc., 127-130.

Evans, J. S., and R. H. Johns, 1996: Strong and violent tornadoes in the Big Horn Mountains of Wyoming. *Preprints*, 18th Conf. Severe Local Storms, San Francisco, CA, Amer. Meteor. Soc., 636-640.

Janish, P. R., C. A. Crisp, J. V. Cortinas, Jr., R. L. Holle, and R. H. Johns, 1996: Development of an ingredients based approach to forecasting hazardous winter weather in an operational environment. *Preprints*, 15th Conf. Weather Analysis and Forecasting, Norfolk, VA, Amer. Meteor. Soc., 56-59.

Janish, P. R., R. H. Johns, and K. C. Crawford, 1996: An evaluation of the 17 August 1994 – Lahoma, Oklahoma supercell/MCS event using conventional and non-conventional analysis and forecasting techniques. *Preprints*, 18th Conf. Severe Local Storms, San Francisco, CA, Amer. Meteor. Soc., 76-80.

Johns, R. H., and J. A. Hart, 1998: The occurrence and non-occurrence of large hail with strong and violent tornado episodes: Frequency distributions. *Preprints*, 19th Conf. Severe Local Storms, Minneapolis, MN, Amer. Meteor. Soc., 283-286.

Johns, R. H., J. C. Broyles, D. Eastlack, H. Guerrero, and K. Harding, 2000: The role of synoptic patterns and temperature and moisture distribution in determining the locations of strong and violent tornado episodes in the north central United States: A preliminary examination. *Preprints*, 20th Conf. Severe Local Storms, Orlando, FL, Amer. Meteor. Soc., 489-492.

Miller, D. J., and R. H. Johns, 2000: A detailed look at extreme wind damage in derecho events. *Preprints*, 20th Conf. Severe Local Storms, Orlando, FL, Amer. Meteor. Soc., 52-55.

Miller, D.J., D.L. Andra Jr., J.S. Evans and R.H. Johns, 2002: Observations of the 27 May 2001 high-end derecho event in Oklahoma. *Preprints*, 21st Conf. Severe Local Storms, San Antonio, Amer. Meteor. Soc., 13-17.

Wasula A.C., L. F. Bosart, R. S. Schneider, S. J. Weiss, R. H. Johns, G. S. Manikin, and P. Welsh, 2004: The structure and climatology of boundary layer winds in the Southeast United States and its relationship to nocturnal tornado episodes. *Preprints*, 22nd Conf. Severe Local Storms, Hyannis, MA, Amer. Meteor. Soc. [CD-ROM]

Other Informal Research Papers

Johns, R. H., 1979: The severe thunderstorm outbreaks of June 28 and 29, 1979. NWS Central Region Tech. Attachment CR 79-10, National Weather Service, Central Region Headquarters, Kansas City, MO, 6 pp.

Johns, R. H., E. Ferguson, and B. E. Smith, 1990: Major tornado outbreak in the eastern Midwest on June 2-3, 1990. NSSFC Operational Notes – Sept. 1990, National Severe Storms Forecast Center, Kansas City, MO, 1-2.

Hart, J. A., and R. H. Johns, 1991: The derecho event of 9 April 1991. NSSFC Operational Notes - Oct. 1991, National Weather Service, National Severe Storms Forecast Center, Kansas City, MO, 5-6.

Henderson, J. H., and R. H. Johns, 1991: Major derecho event occurs on the 7th of July, 1991. NSSFC Operational Notes – Oct. 1991, National Weather Service, National Severe Storms Forecast Center, Kansas City, MO, 1-2.

Johns, R. H., 1992: Mid-June severe weather outbreaks. NSSFC Operational Notes – Sept. 1992, National Weather Service, National Severe Storms Forecast Center, Kansas City, MO, 5-7.

Johns, R. H., and J. A. Hart, 1993: Making potential buoyant energy value comparisons. NSSFC Operational Notes - July 1993, National Weather Service, National Severe Storms Forecast Center, Kansas City, MO, 2-3.