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Publications:

- Lin, X., R.A. Pielke Sr., R. Mahmood, C.A. Fiebrich, and R. Aiken, 2015: Observational evidence of temperature trends at two levels in the surface layer. *Atmos. Chem. Phys.*, **16**, 827-841, doi:10.5194/acp-16-827-2016.
- Guzman, J. A., M.L. Chu, P.J. Starks, D.N. Moriasi, J.L. Steiner, C.A. Fiebrich, and A.G. McCombs, 2014: Upper Washita River experimental watersheds: Data screening procedure for data quality assurance. *J. Environ. Qual.*, **43**, 1250-1261.
- Duchon, C., C. Fiebrich, and D. Grimsley, 2014: Using high-speed photography to study undercatch in tipping-bucket rain gauges. *J. Atmos. Ocean. Tech.*, **31**, 1330-1336.
- Starks, P.J., C.A. Fiebrich, D.L. Grimsley, J.D. Garbrecht, J.L. Steiner, J.A. Guzman, and D.N. Moriasi, 2014: Upper Washita River experimental watersheds: Meteorologic and soil climate measurement networks. *J. Environ. Qual.*, **43**, 1239-1249.
- Scott, B.L., T.E. Ochsner, B.G. Illston, C.A. Fiebrich, J.B. Basara, and A. Sutherland, 2013: New soil property database improves Oklahoma Mesonet soil moisture estimates, *J. Atmos. Ocean. Tech.*, **30**, 2585-2595.
- Illston, B. G., C. A. Fiebrich, D. L. Grimsley, and J. B. Basara, 2013: Evaluation of a heat dissipation sensor for in situ measurement of soil temperature. *Soil Sci. Soc. Of Amer. J.*, **77** (3), 741-747.
- McManus, G., T. W. Schmidlin, and C. A. Fiebrich, 2013: A new minimum temperature record for Oklahoma. *Bull. Amer. Meteor. Soc.*, **94**, 469-470.
- Basara, J. B., B. G. Illston, C. A. Fiebrich, P. D. Browder, C. R. Morgan, A. McCombs, J. P. Bostic, R. A. McPherson, A. J. Schroeder, and K. C. Crawford, 2010: The Oklahoma City Micronet. *Meteorological Applications*, **18**, 252-261.
- Fiebrich, C. A., C. R. Morgan, A. G. McCombs, P. K. Hall, Jr., and R. A. McPherson, 2010: Quality assurance procedures for mesoscale meteorological data. *J. Atmos. Oceanic Technol.*, **27**, 1565-1582.

- Fiebrich, C. A., and K. C. Crawford, 2009: Automation: A step toward improving the quality of daily temperature data produced by climate observing networks. *J. Atmos. Oceanic Technol.*, **26**, 1246-1260.
- Basara, J. B., B. G. Illston, T. E. Winning, and C. A. Fiebrich, 2009: Evaluation of rainfall measurements from the WXT510 sensor for use in the Oklahoma City Micronet. *The Open Atmospheric Science Journal*, **3**, 39-47. Doi: 10.2174/1874282300903010039.
- Fiebrich, C.A., 2009: History of surface weather observations in the United States. *Earth-Science Reviews*, **93**, 77-84.
- Illston, B. G., J. B. Basara, D. K. Fisher, R. Elliott, C. A. Fiebrich, K. C. Crawford, K. Humes, and E. Hunt., 2008: Mesoscale monitoring of soil moisture across a statewide network. *J. Atmos. Oceanic Technol.*, **25**, 167-182.
- Fiebrich, C. A., 2007: Transitioning the historical climate archives to data from newly automated sites-- Maintaining continuity in the temperature climate record. Ph. D. Dissertation, University of Oklahoma, 169 pp.
- McPherson, R. A., C. A. Fiebrich, K. C. Crawford, R. L. Elliott, J. R. Kilby, D. L. Grimsley, J. E. Martinez, J. B. Basara, B. G. Illston, D. A. Morris, K. A. Kloesel, S. J. Stadler, A. D. Melvin, A.J. Sutherland, and H. Shrivastava, 2007: Statewide Monitoring of the Mesoscale Environment: A Technical Update on the Oklahoma Mesonet. *J. Atmos. Oceanic Technol.*, **24**, 301-321.
- Fiebrich, C. A., D. L. Grimsley, R. A. McPherson, K. A. Kesler, and G. R. Essenberg, 2005: The value of routine site visits in managing and maintaining quality data from the Oklahoma Mesonet. *J. Atmos. Oceanic Technol.*, **23**, 406-416.
- Fiebrich, C. A., J. E. Martinez, J. A. Brotzge, and J. B. Basara, 2003: The Oklahoma Mesonet's skin temperature network. *J. Atmos. Oceanic Technol.*, **20**, 1496-1504.
- Fiebrich, C. A., and K. C. Crawford 2001: The impact of unique meteorological phenomena detected by the Oklahoma Mesonet and ARS Micronet on automated quality control. *Bull. Amer. Meteor. Soc.*, **82**, 2173-2187.
- Shafer, M. A., C. A. Fiebrich, D. S. Arndt, S. E. Fredrickson, and T. W. Hughes, 2000: Quality assurance procedures in the Oklahoma Mesonet. *J. Atmos. Oceanic Technol.*, **17**, 474-494.

Conference Preprints:

- Sallee, B.M., T.E. Ochsner, C. Fiebrich and C. Neel, 2014: Estimating Groundwater Recharge Using the Oklahoma Mesonet. *Oklahoma Water Research Symposium*, Oklahoma City, Oklahoma. October 2014.
- Sallee, B.M., T.E. Ochsner, C. Fiebrich and C. Neel, 2014: Estimating Groundwater Recharge Using the Oklahoma Mesonet. *ASA-CSSA-SSSA International Annual Meeting*, Long Beach, California. November 2014.
- King, Jonathan, and C. Fiebrich, 2015: Enhancing the rainfall archive of the Oklahoma Mesonet by installing dual gauges. *14th Annual Student Conference*, Phoenix, AZ, Amer. Meteor. Soc., January 2015.
- Tomaszewski, Jessica M., and C. Fiebrich, 2015: Operating a surface mesonet during extreme weather events. *14th Annual Student Conference*, Phoenix, AZ, Amer. Meteor. Soc., January 2015.
- Stalker, S. L., M. K. Corbett, K. A. Kloesel, C. A. Fiebrich, J. Hocker, A. Melvin, and D. Mattox, 2014: How weather decisions are made in schools: the first step in weather ready schools. *23rd Symposium on Education*, Atlanta, GA, Amer. Meteor. Soc., February 2014.
- Corbett, M. K., S. L. Stalker, K. A. Kloesel, C. A. Fiebrich, J. Hocker, A. Melvin, 2014: Weather ready schools and weather education: what are our students being taught? *23rd Symposium on Education*. Atlanta, GA, Amer. Meteor. Soc., February 2014.
- Morrissey, M., P., Masale, C. Fiebrich, J. S. Greene, and S. Postawko, 2014: Pacific climate services capacity building in cooperation with Pacific Island Country Meteorological Offices and NOAA, a case study in the country of Vanuatu. *26th Conf. on Climate Variability and Change*. Atlanta, GA, Amer. Meteor. Soc., February 2014.
- McCombs, A. G., A. J. Ilk, and C. A. Fiebrich, 2014: Effects of nearby irrigation on Oklahoma Mesonet observations. *18th Conf. on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface*. Atlanta, GA, Amer. Meteor. Soc., February 2014.
- Illston, B. G., C. A. Fiebrich, and D. Grimsley, 2013: Utilizing a Campbell Scientific 229 matric potential sensor as an operational soil temperature sensor. *3rd Conf. on Transition of Research to Operations*, Austin, TX, Amer. Meteor. Soc., January 2013.
- Hocker, J., A. Melvin, K. Kloesel, and C. Fiebrich, 2013: Oklahoma's OK-First weather education program for emergency managers: 15 years of lessons learned and a

- look towards the future. *22nd Symposium on Education*. Austin, TX, Amer. Meteor. Soc., January 2013.
- Fiebrich, C. A., K. Kloesel, D. Grimsley, G. McManus, A. McCombs, and C. Luttrell, 2013: The Oklahoma Mesonet: Evolution from real-time weather network to climate network. *20th Conf. on Applied Climatology*. Austin, TX, Amer. Meteor. Soc., January 2013.
- Illston, B. G., N. E. Bain, C. A. Fiebrich, J. B. Basara, R. Jabrzemski, and B. Vassmer, 2013: Leveraging decadal averages of mesoscale observations from the Oklahoma Mesonet to provide decision-makers enhanced tools. *20th Conf. on Applied Climatology*. Austin, TX, Amer. Meteor. Soc., January 2013.
- Duchon, C., C. A. Fiebrich, and D. L. Grimsley, 2013: Using high-speed photography to study undercatch in tipping-bucket rain gauges. *European Geosciences Union General Assembly*, Vienna, Austria, April 2013.
- Morgan, C. R., G. R. Essenberg, K. C. Crawford, and C. A. Fiebrich, 2007: Improved accuracy in measuring precipitation with the NERON network in New England. *14th Symposium on Meteorological Observations and Instrumentation*, San Antonio, TX, Amer. Meteor. Soc., January 2007.
- Fiebrich, C. A., R. A. McPherson, C. C. Fain, J. R. Henslee, and P. D. Hurlbut: An end-to-end quality assurance system for the modernized COOP network. *15th Conference on Applied Climatology*, Savannah, GA. Amer. Meteor. Soc., June 2005.
- Martinez, J. E., C. A. Fiebrich, and R. A. McPherson: The value of weather station metadata. *15th Conference on Applied Climatology*, Savannah, GA, Amer. Meteor. Soc., June 2005.
- Martinez, J. E., C. A. Fiebrich, and M. A. Shafer: The value of a quality assurance meteorologist. *14th Conference on Applied Climatology*, Seattle, WA, Amer. Meteor. Soc., January 2004.
- Illston, B. G., J. B. Basara, C. A. Fiebrich, M. Wolfinbarger, G. McManus, and D. Arndt: Real-time soil moisture information for drought monitoring and assessment. *14th Conference on Applied Climatology*, Seattle, WA, Amer. Meteor. Soc., January 2004.
- Fiebrich, C. A., D. L. Grimsley, and S. J. Richardson: The impact of a major ice storm on the operations of the Oklahoma Mesonet. *18th International Conference on Interactive Information and Processing Systems (IIPS) for Meteorology, Oceanography, and Hydrology*, Orlando, FL, Amer. Meteor. Soc., January 2002.

Fiebrich, C. A., and R. A. McPherson: An examination of the impact of harvested winter wheat fields on summer air temperature in Oklahoma. *The 98th Association of American Geographers Annual Meeting*, Los Angeles, CA, March 2002.

Fiebrich, C. A., and K. C. Crawford: An investigation of significant low-level temperature inversions as measured by the Oklahoma Mesonet. *10th Symp. On Meteorological Observations and Instrumentation*, Phoenix, AZ, Amer. Meteor. Soc., January 1998.

Fiebrich, C. A., V. J. Dagostaro, and J. P. Dallavalle, 1997: An algorithm to eliminate precipitation reports caused by surface condensation in AEV-ASOS data. TDL Office Note 97-2, National Weather Service, NOAA, U.S. Department of Commerce, 6 pp.