

John Kochendorfer, Ph.D.

NOTE: A more up-to-date list of publications is available at [Google Scholar](#).
Links herein are to publications outside the .gov domain and open in separate pages.

Featured Publications

Kochendorfer, J., M.E. Earle, D. Hodyss, A. Reverdin, Y. Roulet, R. Nitu, R. Rasmussen, S. Landolt, S. Buisan, and T. Laine, (2020). **Undercatch adjustments for tipping bucket gauge measurements of solid precipitation**. *J. Hydrometeor.*, 21, 1193–1205, <https://doi.org/10.1175/JHM-D-19-0256.1>.

Nitu, R., Y.-A. Roulet, M. Wolff, M. Earle, A. Reverdin, C. Smith, , J. Kochendorfer, S. Morin, R. Rasmussen, K. Wong, J. Alastrué, L. Arnold, B. Baker, S. Buisán, J.L. Collado, M. Colli, B. Collins, A. Gaydos, H.-R. Hannula, J. Hoover, P. Joe, A. Kontu, T. Laine, L. Lanza, E. Lanzinger, G.W. Lee, Y. Lejeune, L. Leppänen, E. Mekis, J.-M. Panel, A. Poikonen, S. Ryu, F. Sabatini, J. Theriault, D. Yang, C. Genthon, F. van den Heuvel, N. Hirasawa, N. H. Konishi, H. Motoyoshi, S. Nakai, K. Nishimura, A. Senese, and K. Yamashita (2018), **WMO Solid Precipitation Intercomparison Experiment (SPICE) (2012 - 2015)**, WMO, IOM No. 131.

Dobosy, R., D. Sayres, C. Healy, E. Dumas, M. Heuer, J. Kochendorfer, B. Baker, and J. Anderson (2017): **Estimating Random Uncertainty in Airborne Flux Measurements over Alaskan Tundra: Update on the Flux Fragment Method**. *J. Atmos. Oceanic Technol.*, 34, 1807–1822, <https://doi.org/10.1175/JTECH-D-16-0187.1>

Kochendorfer, J., Nitu, R., Wolff, M., Mekis, E., Rasmussen, R., Baker, B., Earle, M. E., Reverdin, A., Wong, K., Smith, C. D., Yang, D., Roulet, Y.-A., Buisan, S., Laine, T., Lee, G., Aceituno, J. L. C., Alastrué, J., Isaksen, K., Meyers, T., Brækkan, R., Landolt, S., Jachcik, A., and Poikonen, A. (2017) **Analysis Of Single-Alter-Shielded and Unshielded Measurements of Mixed and Solid Precipitation from WMO-SPICE**, *Hydrol. Earth Syst. Sci.*, 21, 3525-3542, <https://doi.org/10.5194/hess-21-3525-2017>

Sayres, D. S., Dobosy, R., Healy, C., Dumas, E., Kochendorfer, J., Munster, J., Wilkerson, J., Baker, B., and Anderson, J. G.: **Arctic Regional Methane Fluxes by Ecotope As Derived Using Eddy Covariance from a Low-Flying Aircraft** (2017) *Atmos. Chem. Phys.*, 17, 8619-8633, <https://doi.org/10.5194/acp-17-8619-2017>

Kochendorfer, J., Rasmussen, R., Wolff, M., Baker, B., Hall, M. E., Meyers, T., Landolt, S., Jachcik, A., Isaksen, K., Brækkan, R., and Leeper, R. (2017) **The Quantification and Correction of Wind-Induced Precipitation Measurement Errors**, *Hydrol. Earth Syst. Sci.*, 21, 1973-1989, <https://doi.org/10.5194/hess-21-1973-2017>

Krishnan P., J. Kochendorfer, E.J. Dumas, P.C. Guillevic, C. B. Baker, Tilden P. Meyers, B. Martos (2015) **Comparison of In-Situ, Aircraft, and Satellite Land Surface Temperature Measurements Over a NOAA Climate Reference Network Site**, *Remote Sensing of Environment*, Volume 165, August 2015, Pages 249-264, ISSN 0034-4257, <http://dx.doi.org/10.1016/j.rse.2015.05.011>.

T.B. Wilson, J. Kochendorfer, T.P. Meyers, M. Heuer, K. Sloop, J. Miller (2014) **Leaf Litter Water Content and Soil Surface CO₂ Fluxes in a Deciduous Forest**, *Agricultural and Forest Meteorology*, Volumes 192–193, 15 July 2014, Pages 42-50, ISSN 0168-1923.

Ikawa H., I. Faloona, J. Kochendorfer, K.T. Paw U, and W.C. Oechel (2013) **Air-Sea Exchange of Co₂ at a Northern California Coastal Site Along the California Current Upwelling System.** *Biogeosciences*, 10, 4419-4432, 2013. doi:10.5194/bg-10-4419-2013.

Kochendorfer, J., T.P. Meyers, J. Frank, W. Massman, and M. Heuer (2012) **How Well Can We Measure the Vertical Wind Speed? Implications for Fluxes of Energy and Mass.** *Boundary-Layer Meteorol.* doi:10.1007/s10546-012-9738-1.

Publications

Smith, C. D., Ross, A., Earle, M. E., Wolff, M., Buisán, S., Roulet, Y.-A., and Laine, T.: **Evaluation of the WMO Solid Precipitation Intercomparison Experiment (SPICE) transfer functions for adjusting the wind bias in solid precipitation measurements** (2020). *Hydrol. Earth Syst. Sci.*, 24, 4025–4043, <https://doi.org/10.5194/hess-24-4025-2020>.

Buisán, S. T., Smith, C. D., Ross, A., Collado, J. L., Alastrué, J., Wolff, M., Roulet, Y.-A., Earle, M. E., Laine, T., Rasmussen, R., and Nitu, R. (2020). **The potential for uncertainty in Numerical Weather Prediction model verification when using solid precipitation observations,** *Atmospheric Science Letters*, n/a, e976, <https://doi.org/10.1002/asl.976>

Wilson, T. B., Diamond, H. J., Kochendorfer, J., Meyers, T. P., Hall, M., Casey, N. W., Baker, C. B., Leeper, R., and Palecki, M. A. (2020). **Evaluating time domain reflectometry and coaxial impedance sensors for soil observations by the U.S. Climate Reference Network,** *Vadose Zone Journal*, 19, e20013, 10.1002/vzj2.20013, 2020.

Leeper, R. D., J. Kochendorfer, T. Henderson, and M. A. Palecki (2019). **Impacts of Urban Built Structures on Air Temperature Observations,** *J. Appl. Meteor. Climatol.*, 58, 1369–1380, <https://doi.org/10.1175/JAMC-D-19-0002.1>

Pierre, A., S. Justras, C. Smith, J. Kochendorfer, V. Fortin, and F. Anctil (2019). **Evaluation of catch efficiency transfer functions for unshielded and single-Alter-shielded solid precipitation measurements,** *J. of Atmos. and Oceanic Technol.*, 36, 865–881, <https://doi.org/10.1175/JTECH-D-18-0112.1>

Buisán, S. T., M. E. Earle, J. L. Collado, J. Kochendorfer, J. Alastrué, M. Wolff, C. D. Smith, and J. I. López-Moreno (2017). **Assessment of Snowfall Accumulation Underestimation by Tipping Bucket Gauges in The Spanish Operational Network,** *Atmospheric Measurement Techniques*, 10, 1079-1091, doi:10.5194/amt-10-1079-2017

Kochendorfer, J., Nitu, R., Wolff, M., Mekis, E., Rasmussen, R., Baker, B., Earle, M. E., Reverdin, A., Wong, K., Smith, C. D., Yang, D., Roulet, Y.-A., Meyers, T., Buisan, S., Isaksen, K., Brækkan, R., Landolt, S., and Jachcik, A. (2018) **Testing and development of transfer functions for weighing precipitation gauges in WMO-SPICE,** *Hydrol. Earth Syst. Sci.*, 22, 1437-1452, <https://doi.org/10.5194/hess-22-1437-2018>

Buisán, S. T., Earle, M. E., Collado, J. L., Kochendorfer, J., Alastrué, J., Wolff, M., Smith, C. D., and López-Moreno, J. I. (2017) **Assessment Of Snowfall Accumulation Underestimation by Tipping Bucket Gauges in the Spanish Operational Network,** *Atmos. Meas. Tech.*, 10, 1079-1091, doi:10.5194/amt-10-1079-2017

Timothy Wilson, C. Baker, Tilden Meyers, John Kochendorfer, Mark Hall, Jesse Bell, Howard Diamond, Michael Palecki (2016): **Site-Specific Soil Properties of the U.S. Climate Reference Network Soil Moisture**, *Vadose Zone Journal*, Vol. 15, Iss. 11, November 2016, doi: 10.2136/vzj2016.05.0047.

Scott L. Graham, John Kochendorfer, Andrew M.S. McMillan, Maurice J. Duncan, M.S. Srinivasan, Gladys Hertzog (2016): **Effects of Agricultural Management on Measurements, Prediction, and Partitioning of Evapotranspiration in Irrigated Grasslands**, *Agricultural Water Management*, Volume 177, November 2016, Pages 340-347, ISSN 0378-3774, doi: 10.1016/j.agwat.2016.08.015.

Buisan, S, J.I. Lopez-Moreno, and J. Kochendorfer (2016): **Impact of Weather Type Variability on Winter Precipitation, Temperature and Annual Snowpack in The Spanish Pyrenees**. *Climate Research*, 69, 79-92, 10.3354/cr01391, 2016.

Colli M., R. Rasmussen, J. M. Thériault, L. G. Lanza, C. B Baker, and J. Kochendorfer (2015): **An Improved Trajectory Model to Evaluate the Collection Performance of Snow Gauges**. *J. Appl. Meteor. Climatol.*, 54, 1826–1836.

Leeper, R. D. and J. Kochendorfer (2015) **Evaporation from Weighing Precipitation Gauges: Impacts on Automated Gauge Measurements and Quality Assurance Methods**, *Atmos. Meas. Tech.*, 8, 2291-2300, doi:10.5194/amt-8-2291-2015.

J.E. Bell, M.A. Palecki, B. Baker, W.G. Collins, J.H. Lawrimore, R.D. Leeper, M.E. Hall, John Kochendorfer, T.P. Meyers, T. Wilson, H.J. Diamond (2013).. **U.S. Climate Reference Network Soil Moisture and Temperature Observations**, *Journal of Hydrometeorology*. 14, 977–988. doi: 10.1175/JHM-D-12-0146.1.

Bell, Jesse E, Palecki, Michael A, Baker, C Bruce, Collins, William G, Lawrimore, Jay H, Leeper, Ronald D, Hall, Mark E, Kochendorfer, John, Meyers, Tilden P, Wilson, Tim (2013), **US Climate Reference Network Soil Moisture and Temperature Observations.** , *Journal of Hydrometeorology*, 14, 3, 977-988.

Kochendorfer, J., T.P. Meyers, J. Frank, W. Massman, and M. Heuer (2013) **Reply to The Comment By Mauder On “How Well Can We Measure The Vertical Wind Speed? Implications for Fluxes of Energy and Mass”**. *Boundary-Layer Meteorol.* doi: 10.1007/s10546-012-9792-8.

Wilson, T. B., T. P Meyers, J. Kochendorfer, M.C. Anderson, and M. Heuer (2012), **The Effect of Soil Surface Litter Residue on Energy and Carbon Fluxes in a Deciduous Forest**. *Agric. and Forest Meteorol.* 161:(134-147).

Rasmussen, R., C.B. Baker, J. Kochendorfer., T.P. Meyers, S. Landolt, A. P. Fischer, J. Black, J.M. Thériault, P. Kucera, D. Gochis, C. Smith, R. Nitu, M. Hall, K. Ikeda, and E. Gutmann (2012), **How Well Are We Measuring Snow? The NOAA/FAA/NCAR Winter Precipitation Test Bed**. *Bull. Amer. Meteorol. Soc.* 93(6):811-829.

Kochendorfer, J., E.G. Castillo, E. Haas, W.C. Oechel, K.T. Paw U (2011), **Net Ecosystem Exchange, Evapotranspiration and Canopy Conductance in a Riparian Forest.** *Agric. and Forest Meteorol.* 151(5):544-553.

Kochendorfer, J., K.T. Paw U (2011), **Field Estimates of Scalar Advection across a Canopy Edge.** *Agric. and Forest Meteorol.* 151(5):585-594.

Myles, L., J. Kochendorfer, M. W. Heuer, and T. P. Meyers. (2011), **Measurement of Trace Gas Fluxes over an Unfertilized Agricultural Field Using the Flux-gradient Technique,** *Journal of Environmental Quality.* 40:1359–1365. doi:10.2134/jeq2009.0386

Kochendorfer, J., M. E. Hall, T. P. Meyers and C. B. Baker (2009), **Climate Reference Network Solar Powered Site Analysis,** *NOAA Technical Memo OAR ARL-262.*

Paw U, K. T., S. Wharton, and J. Kochendorfer, (2004), **Evapotranspiration: Measuring and Modeling.** *Acta Hort.* (ISHS) 664:537-554