

Temple R. Lee, Ph.D.

Note: A more extensive listing of publications can be found [here](#).

Selected Publications

Lee, T.R., De Wekker, S.F.J. & Pal, S. (2018). **The Impact of the Afternoon Planetary Boundary-Layer Height on the Diurnal Cycle of CO and CO₂ Mixing Ratios at a Low-Altitude Mountaintop.** *Boundary-Layer Meteorol*, 168: 81. <https://doi.org/10.1007/s10546-018-0343-9>

Wulfmeyer, V., D.D. Turner, B. Baker, R. Banta, A. Behrendt, T. Bonin, W. Brewer, M. Buban, A. Choukulkar, E. Dumas, R. Hardesty, T. Heus, J. Ingwersen, D. Lange, T. Lee, S. Metzendorf, S. Muppa, T. Meyers, R. Newsom, M. Osman, S. Raasch, J. Santanello, C. Senff, F. Späth, T. Wagner, and T. Weckwerth (2018). **A New Research Approach for Observing and Characterizing Land-Atmosphere Feedback.** *Bull. Amer. Meteor. Soc.* <https://doi.org/10.1175/BAMS-D-17-0009.1>

Lee, T. R., M. Buban, M. A. Palecki, R. D. Leeper, H. J. Diamond, E. Dumas, T. P. Meyers, and C. B. Baker (2018), **Great American Eclipse data may fine-tune weather forecasts**, *Eos*, 99, <https://doi.org/10.1029/2018EO103931>. Published on 16 August 2018 <https://eos.org/project-updates/great-american-eclipse-data-may-fine-tune-weather-forecasts>

Lee, T. R., M. Buban, E. Dumas, and C. B. Baker, 2017: **A New Technique To Estimate Sensible Heat Fluxes Around Micrometeorological Towers Using Small Unmanned Aircraft Systems.** *Journal of Atmospheric and Oceanic Technology* 34 (9), 2103-2112, doi:10.1175/JTECH-D-17-0065.1.

Pal, S., T. R. Lee, and S. F. J. De Wekker, 2017: **A study of the combined impact of boundary layer height and near-surface meteorology to the CO diurnal cycle at a low mountaintop site using simultaneous lidar and in-situ observations.** *Atmospheric Environment* 164, 165-179, doi:<https://doi.org/10.1016/j.atmosenv.2017.05.041>.

Lee, T. R. and S. Pal, 2017: **On the potential of 25 years (1991-2015) of regular rawinsonde measurements for elucidating key climatological and spatiotemporal patterns of afternoon boundary layer depths over the contiguous US.** *Advances in Meteorology 2017*, 6841239, doi:10.1155/2017/6841239.

Lee, T. R. and S. F. J. De Wekker, 2016: **Estimating daytime planetary boundary layer heights over a valley from rawinsonde observations at a nearby airport: An application to the Page Valley in Virginia, USA.** *Journal of Applied Meteorology and Climatology* 55 (3), 791-809, doi:10.1175/JAMC-D-15-0300.1.

Dumas, Edward James, Lee, Temple R, Buban, Michael Scott, Baker, Clifford Bruce, 2016:, **Small Unmanned Aircraft System (Suas) Measurements During The 2016 Verifications Of The Origins Of Rotation In Tornadoes Experiment Southeast (VORTEX-SE).**

Lee, T. R., S. F. J. De Wekker, S. Pal, A. E. Andrews, and J. Kofler, 2015: **Meteorological controls on the diurnal variability of carbon monoxide mixing ratio at a mountaintop monitoring site in the Appalachian Mountains.** *Tellus B* 67, 25659, doi:<http://dx.doi.org/10.3402/tellusb.v67.25659>.

Lee, T. R., S. F. J. De Wekker, and J. E. B. Wofford, 2014: **Downscaling maximum temperature projections to subkilometer resolutions in the Shenandoah National Park of Virginia, USA.** *Advances in Meteorology 2014*, 594965, doi:10.1155/2014/594965.

Pal, S., T. R. Lee, S. Phelps, and S. F. J. De Wekker, 2014: **Impact of atmospheric boundary layer depth variability and wind reversal on the diurnal variability of aerosol concentration at a valley site.** *Science of the Total Environment* 496, 424-434, doi:10.1016/j.scitotenv.2014.07.067.

Hondula, D. M., R. E. Davis, D. B. Knight, L. J. Sitka, K. Enfield, S. B. Gawtry, P. J. Stenger, M. E. Deaton, C. P. Normile, and T. R. Lee, 2013: **A respiratory alert model for the Shenandoah Valley, Virginia, USA.** *International Journal of Biometeorology* **57**, 91-105, doi:10.1007/s00484-012-0537-7.

Lee, T. R., S. F. J. De Wekker, A. E. Andrews, J. Kofler, and J. Williams, 2012: **Carbon dioxide variability during cold front passages and fair weather days at a forested mountaintop site.** *Atmospheric Environment* **46**, 405-416, doi:10.1016/j.atmosenv.2011.09.068.

Hondula, David M., L. Sitka, R. E. Davis, D. B. Knight, S. D. Gawtry, M. L. Deaton, T. R. Lee, C. P. Normile, and P. J. Stenger, 2010: **A back-trajectory and air mass climatology for the Northern Shenandoah Valley, USA.** *International Journal of Climatology* **30**, 569-581, doi:10.1002/joc.1896.

Knight, D. B., R. E. Davis, S. C. Sheridan, D. M. Hondula, L.J. Sitka, M. L. Deaton, T. R. Lee, S.D. Gawtry, P. J. Stenger, F. Mazzei and B. P. Kenny, 2008: **Increasing frequencies of warm and humid air masses over the conterminous United States from 1948 to 2005.** *Geophysical Research Letters* **35**, L10702, doi:10.1029/2008GL033697.

Lee, T. R. and G. M. Hornberger, 2006: **Inferred bimodality in the distribution of soil moisture at Big Meadows, Shenandoah National Park, Virginia.** *Geophysical Research Letters* **33**, L06407, doi:10.1029/2005GL025536.