

## LMOS 2017 and LMOS-Adjacent Publication List (updated 10/12/2022)

LMOS 2017: <https://www-air.larc.nasa.gov/missions/lmos/>

### LMOS-Adjacent Items marked with ◇

#### Peer-Reviewed Journal Publications

2022

Cleary, Patricia A., et al. "Observations of the lower atmosphere from the 2021 WiscoDISCO campaign." *Earth System Science Data* 14.5 (2022): 2129-2145. ◇

Wagner, T.J., Czarnetzki, A.C., Christiansen, M., Pierce, R.B., Stanier, C.O., Dickens, A.F., Eloranta, E.W. Observations of the Development and Vertical Structure of the Lake-Breeze Circulation during the 2017 Lake Michigan Ozone Study. *Journal of Atmospheric Sciences*, <https://doi.org/10.1175/JAS-D-20-0297.1>, 2022.

Cleary, P.A., Dickens, A., McIlquham, M., Sanchez, M., Geib, K., Hedberg, C., Hupy, J., Watson, M.W., Fuoco, M., Olson, E.R., Pierce, R.B., Stanier, C.O., Long, R., Valin, L., Conley, S., Smith, M. "Impacts of lake breeze meteorology on ozone gradient observations along Lake Michigan shorelines in Wisconsin." *Atmospheric Environment*, 269, 118834, <https://doi.org/10.1016/j.atmosenv.2021.118834>, 2022.

2021

Stanier, C.O., Pierce, R.B., Abdioskouei, M., Adelman, Z.E., Al-Saadi, J., Alwe, H.D., Bertram, T.H., Carmichael, G.R., Christiansen, M.B., Cleary, P.A., Czarnetzki, A.C., Dickens, A.F., Fuoco, M.A., Hughes, D.D., Hupy, J.P., Janz, S.J., Judd, L.M., Kenski, D., Kowalewski, M.G., Long, R.W., Millet, D.B., Novak, G., Roozitalab, B., Shaw, S.L., Stone, E.A., Szykman, J., Valin, L., Vermeuel, M., Wagner, T.J., Whitehill, A.R. Overview of the Lake Michigan Ozone Study 2017. *Bulletin of the American Meteorological Society*, <https://doi.org/10.1175/BAMS-D-20-0061.1>, 2021.

Doak, A.G., Christiansen, M.B., Alwe, H.D., Bertram, T.H., Carmichael, G.C., Cleary, P., Czarnetzki, A.C., Dickens, A.F., Janssen, M., Kenski, D., Millet, D.B., Novak, G., Pierce, R.B., Stone, E.A., Long, R., Vermeuel, M., Wagner, T.J., Valin, L., Stanier, C.O. "Characterization of ground-based atmospheric pollution and meteorology sampling stations during the Lake Michigan Ozone Study 2017." *Journal of Air and Waste Management*, <https://doi.org/10.1080/10962247.2021.1900000>, 2021.

Hughes, D.D., Christiansen, M., Milani, A., Vermeuel, M.P., Novak, G.A., Alwe, H.D., Dickens, A.F., Pierce, R.B., Millet, D.B., Bertram, T.H., Stanier, C.O., Stone, E.A. "PM2.5 chemistry, organosulfates, and SOA formation during the 2017 Lake Michigan Ozone Study." *Atmospheric Environment*, 244, 117939, <https://doi.org/10.1016/j.atmosenv.2020.117939>, 2021.

2020

Abdi-Oskouei, M., Carmichael, G.R., Christiansen, M., Ferrada, G., Roozitalab, B., Sobhani, N., Wade, K., Czarnetzki, A., Pierce, R.B., Wagner, T., and C.O. Stanier. "Sensitivity of meteorological skill to selection of WRF-Chem physical parameterizations and impact on ozone prediction during the Lake Michigan Ozone Study (LMOS)." *J. Geophys. Res. Atmos.*, <https://doi.org/10.1029/2019JD031971>, 2020.

2019

Vermeuel, M. P., G. A. Novak, H. D. Alwe, D. D. Hughes, R. Kaleel, A. F. Dickens, D. Kenski, A. Czarnetzki, E. A. Stone, C. O. Stanier, R. B. Pierce, D. B. Millet and T. H. Bertram. "Sensitivity of Ozone Production to NO<sub>x</sub> and VOC along the Lake Michigan Coastline." *J. Geophys. Res. Atmos.*, 124, 20, pp. 10989-11006, <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2019JD030842>, 2019.

Judd, L. M, J. A. Al-Saadi, S. J. Janz, M. G. Kowalewski, R. B. Pierce, J. J. Szykman, L. C. Valin, R. Swap, A. Cede, M. Mueller, M. Tiefengraber, N. Abuhassan, D. Williams. "Evaluating the impact of spatial resolution on tropospheric NO<sub>2</sub> column comparisons within urban areas using high-resolution airborne data." *Atmos. Meas. Tech. Discuss.*, [airhttps://doi.org/10.5194/amt-2019-161](https://doi.org/10.5194/amt-2019-161), 2019.

### Submitted and In-Preparation Manuscripts

Baker, K., Liljegren, J., Valin, L., Judd, L., Szykman, J., Millet, D., Czarnetzki, A., Whitehill, A., Murphy, B., and Stanier, C. Photochemical Model Representation of Ozone and Precursors During the 2017 Lake Michigan Ozone Study (LMOS). In review at *Atmospheric Environment*.

Abdi-Oskouei, M., Roozitalab, B., Stanier, C.O., Christiansen, M., Pfister, G., Pierce, R.B., McDonald, B., Adelman, Z., Janssen, M., Dickens, A., and Carmichael, G.R. The Impact of Volatile Chemical Products, Other VOCs, and NO<sub>x</sub> on Peak Ozone in the Lake Michigan Region. Under review at the *Journal of Geophysical Research – Atmospheres*.

Christiansen, M., Stanier, C.O., Pierce, R.B., Hughes, D.D., Stone, E.A., and Elzey, S. Size Resolved Aerosol Characterization and In-field Comparative Evaluation of TSI 1 nm SMPS at Lake Michigan Coastal Station. Manuscript in preparation.

J. J. M. Acdan, R. B. Pierce, A. F. Dickens, Z. Adelman, T. Nergui. Ozone-NO<sub>x</sub>-VOC Sensitivity of the Lake Michigan Region Inferred from Satellite Observations and Ground-Based Measurements. Manuscript in preparation. ◇

R. Bradley Pierce, Monica Harkey, Allen Lenzen, Lee M. Crouce, Jason A. Otkin, Jonathan L. Case, David S. Henderson, Zac Adelman, Tsengel Nergui, Christopher R. Hain, High resolution CMAQ simulations of ozone exceedance events during the Lake Michigan Ozone Study. Manuscript in preparation.

Jason A. Otkin, Lee M. Crounce, Jonathan L. Case, R. Bradley Pierce, Monica Harkey, Allen Lenzen, David S. Henderson, Zac Adelman, Tsengel Nergui, Christopher R. Hain, Impact of physical parameterizations, land surface analyses, and nudging on high resolution meteorological modelling during the Lake Michigan Ozone Study. Manuscript in preparation.

### **Publicly-Released Datasets**

Lake Michigan Ozone Study 2017 Team. "LMOS 2017 Public Data Archive." NASA Airborne Science Data for Atmospheric Composition, <https://www-air.larc.nasa.gov/cgi-bin/ArcView/lmos>, 2018.

### **Other Technical Writings, Not Formally Peer-Reviewed (Technical Reports, Dissertations, Magazine Articles, White Papers, etc.)**

Acdan et al. (2020) Final Report: Observation-Based Analyses of the Sensitivity of Ozone Formation in the Lake Michigan Region to NO<sub>x</sub> and VOC Emissions. Prepared for the Lake Michigan Air Directors Consortium. 65 pp. [https://www.ladco.org/wp-content/uploads/Projects/Ozone/2020\\_WI-DNR\\_OBM\\_Analysis/LADCO\\_FinalReport\\_2020.pdf](https://www.ladco.org/wp-content/uploads/Projects/Ozone/2020_WI-DNR_OBM_Analysis/LADCO_FinalReport_2020.pdf). ◇

Acdan, J. (2021). Investigating formaldehyde to nitrogen dioxide ratios using satellite, in situ, and air quality modeling data. M.S. Thesis, University of Wisconsin-Madison. [https://www.aos.wisc.edu/aosjournal/Volume38/Acdan\\_MS.pdf](https://www.aos.wisc.edu/aosjournal/Volume38/Acdan_MS.pdf). ◇

Adelman, Zachariah E., Pierce, R. Bradley, Stanier, Charles O., and Kenski, Donna M. "LMOS: 2017 Lake Michigan Ozone Study," em, The Magazine for Environmental Managers, by the Air and Waste Management Association, pp. 23-27, Oct 2020.

Lake Michigan Ozone Study 2017 Team. "2017 Lake Michigan Ozone Study (LMOS) Preliminary Finding Report," [https://www.ladco.org/wp-content/uploads/Research/LMOS2017/LMOS\\_LADCO\\_report\\_revision\\_apr2019\\_final.pdf](https://www.ladco.org/wp-content/uploads/Research/LMOS2017/LMOS_LADCO_report_revision_apr2019_final.pdf), 2019.

Pierce, B., Al-Saadi, J., Bertram, T., Dickens, A., Kaleel, R., Kenski, D., Stanier, C. "Open letter to parties interested in the 2017 Lake Michigan Ozone Study." [https://www-air.larc.nasa.gov/missions/lmos/docs/update\\_statement\\_mar21\\_final.pdf](https://www-air.larc.nasa.gov/missions/lmos/docs/update_statement_mar21_final.pdf), 2017.

Pierce, B., Kaleel, R., Dickens, A., Bertram, T., Stanier, C, Kenski, D. "White Paper: Lake Michigan Ozone Study 2017 (LMOS 2017)." [https://www-air.larc.nasa.gov/missions/lmos/docs/Great\\_Lakes\\_Ozone\\_Study\\_White\\_Paper\\_Draft\\_v6.pdf](https://www-air.larc.nasa.gov/missions/lmos/docs/Great_Lakes_Ozone_Study_White_Paper_Draft_v6.pdf), 2016.