**Services and Products**

**Policy Relevant Syntheses of Findings from Field Studies:** The scientific results of atmospheric chemistry field studies are generally reported in a multitude of journals in papers written by the individual participating scientists. While effective for advancing science, this situation makes it difficult for policy makers to be fully informed and to bring the latest scientific results into the design of air quality and climate change policies. Policy relevant syntheses of the field study results serve to overcome this difficulty. David Parrish has considerable experience synthesizing the policy relevant findings from several field studies, including:

Parrish, D.D. (2014a), Synthesis of Policy Relevant Findings from the CalNex 2010 Field Study, *Final Report to the Research Division of the California Air Resources Board (CARB).*

Parrish, D.D., et al. (2009a), Overview of the Second Texas Air Quality Study (TexAQS II) and the Gulf of Mexico Atmospheric Composition and Climate Study (GoMACCS), *J. Geophys. Res.*, *114*, D00F13, doi:10.1029/2009JD011842.

E.B. Cowling, C. Furiness, B. Dimitriades, and D.D. Parrish (2007), Final Rapid Science Synthesis Report: Findings from the Second Texas Air Quality Study (TexAQS II), *Final Report to the Texas Commission on Environmental Quality (TCEQ).*

**Integration of Atmospheric Chemistry Issues:** Progress in atmospheric chemistry issues is made by many scientists, publishing their results in a wide range of journals. David Parrish has a demonstrated capability of publishing papers that integrate past, sometimes divergent results, with important advances. The result is a wide spectrum of landmark papers that coordinate our advancing knowledge of important issues in atmospheric chemistry. Examples include studies that span all areas of atmospheric chemistry, including emissions (*Parrish*, 2006; *Parrish et al.*, 2009b), air pollution in mega-cities (*Parrish and Zhu*, 2009; *Parrish et al.*, 2011), urban photochemistry (*Parrish* et al., 2012), impact of intercontinental transport of pollutants (*Parrish et al.*, 2010; *Law and* *Parrish*, 2011) and character of the remote troposphere (*Parrish et al.*, 2013; 2014).

Parrish, D.D., et al. (2014b), Long-term Changes in Lower Tropospheric Baseline Ozone Concentrations: Comparing Chemistry-Climate Models and Observations at Northern Midlatitudes, *J. Geophys. Res. Atmos., 119*, 5719**–**5736, doi:10.1002/2013JD021435.

Parrish, D. D., et al. (2013), Lower Tropospheric Ozone at Northern Midlatitudes: Changing Seasonal Cycle, *Geophys. Res. Lett., 40*, 1631–1636, doi: 10.1002/grl.50303.

Parrish, D.D., et al. (2012), Primary and Secondary Sources of Formaldehyde in Urban Atmospheres: Houston Texas Region, *Atmos. Chem. Phys., 12*, 3273–3288.

Parrish, D.D., et al. (2011), Air Quality Progress in North American Mega-Cities: A Review, *Atmos. Environ.*, *45*(390), 7015-7025, doi:10.1016/j.atmosenv.2011.09.039.

Law, K., and D.D. Parrish (2011), Chapter 2 - Observational Evidence and Capabilities Related to Intercontinental Transport of Ozone and Particulate Matter, in *Hemispheric Transport of Air Pollution 2010, Part A: Ozone and Particulate Matter; Air Pollution Studies No. 17*, edited by F. Dentener, T. Keating and H. Akimoto, United Nations, New York and Geneva.

Parrish, D.D., et al. (2010), Impact of Transported Background Ozone Inflow on Summertime Air Quality in a California Ozone Exceedance Area, *Atmos. Chem. Phys., 10,* 10093–10109, doi:10.5194/acp-10-10093-2010.

Parrish, D.D., and T. Zhu (2009), Perspective: Clean Air for Mega-Cities, *Science*, 326, 674-675.

Parrish, D.D., et al. (2009b), Comparison of Air Pollutant Emissions among Mega-Cities, *Atmos. Environ., 43*, 6435-6441.

Parrish, D.D. (2006) Critical Evaluation of US On-Road Vehicle Emission Inventories, *Atmos. Environ., 40*, 2288-2300.