

NASA CMS Atmospheric Flux Stakeholder Panel

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New York State Climate Act – huge energy transition.

- 40% reduction in greenhouse gas (GHG) emissions from 1990 levels by 2030;
- 85% reduction in GHG by 2050;
- GHG inventory to be updated annually

Gridded inventory by Lee Murray (U. Rochester)
Using 3 long-term sites, TROPOMI, 22 neighboring sites and aircraft data using GEOS-Chem adjoint.

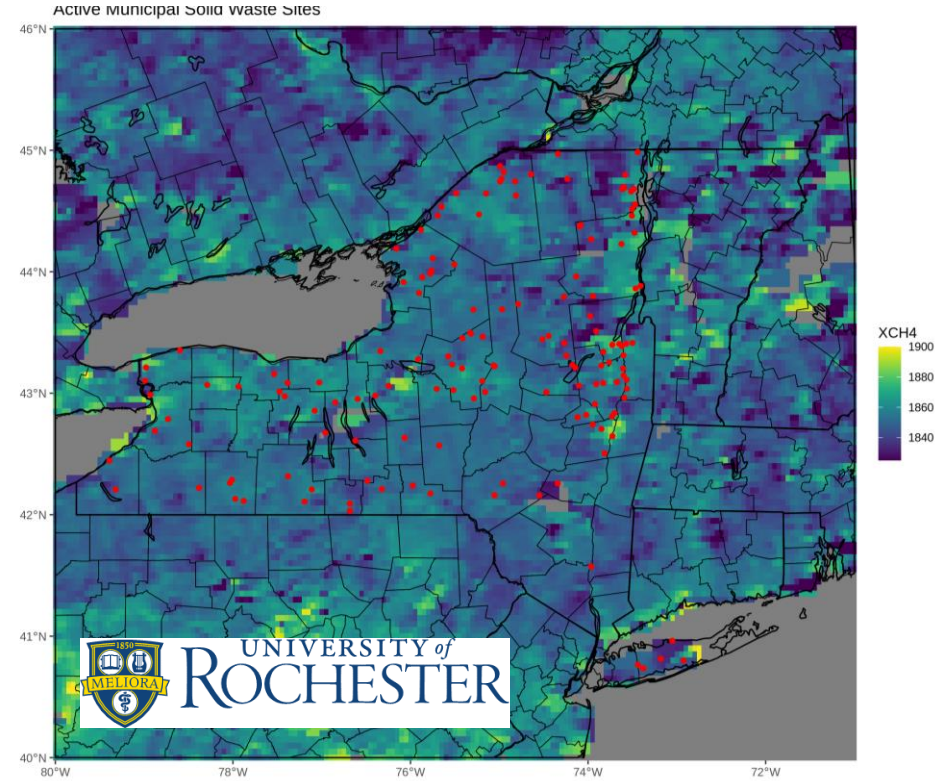
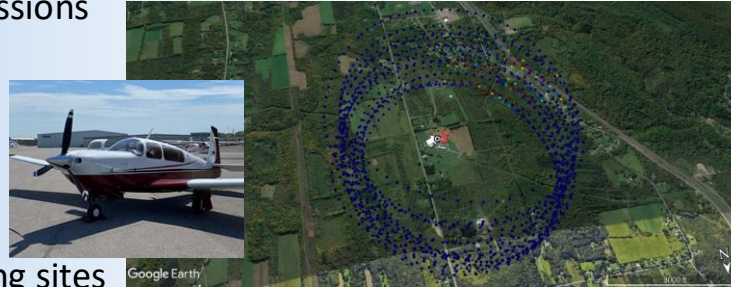
Measurement platforms: Aircraft, mobile laboratory, permanent monitoring stations, and backpacks.

Sources: Compressor stations, landfills, wastewater treatment facilities, manure management, other.

Challenges with TROPOMI measurements over New York City, coastal, Great Lakes, and Finger Lakes regions. Does not show elevated emissions over major point sources such as landfills. Artifacts of different surface albedos.

Scientific advancements needed:

- Reduced interference from albedo
- Higher resolution measurements to develop higher resolution maps, identify more point sources, and measure regional fluxes.



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