Detecting Pandemic-Related Air Quality Changes

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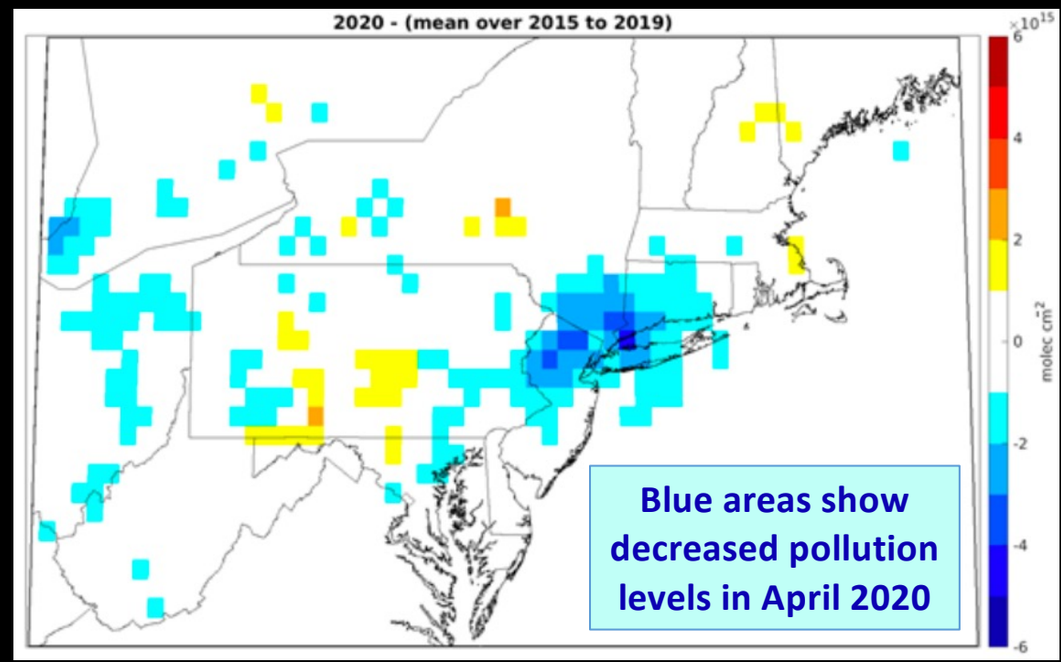
Can we attribute improvements in air quality in the Northeastern U.S. to reduced economic activity during the early pandemic?

Retrievals of NO_2 and CO from the NASA Ozone Monitoring Instrument (OMI) and Atmospheric Infrared Sounder (AIRS) data show cleaner air during the early pandemic lockdown.

However, the improvement was within normal year-to-year differences and previous trends.

Reduced human activity during the early pandemic did not lead to unprecedented changes in regional air quality.

Large-scale social disruptions like the pandemic offer an opportunity to understand the complex relationship between human activities and regional air quality.



OMI nitrogen dioxide changes (April 2020 minus 2015-2019 average)

Braneon, C., R.D Field, E. Seto, K. Chen, K. McConnell, L. Robinson, and S. Richardson, 2020: Towards disentangling lockdown-driven air quality changes in the Northeastern U.S. *J. Extreme Events*, accepted.