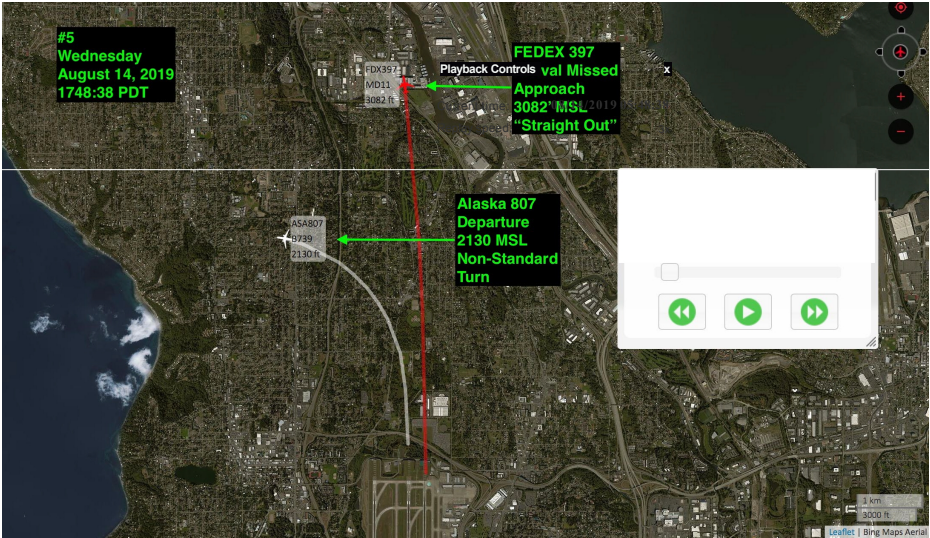




Airfield

Aerial Photo Taken October 2019

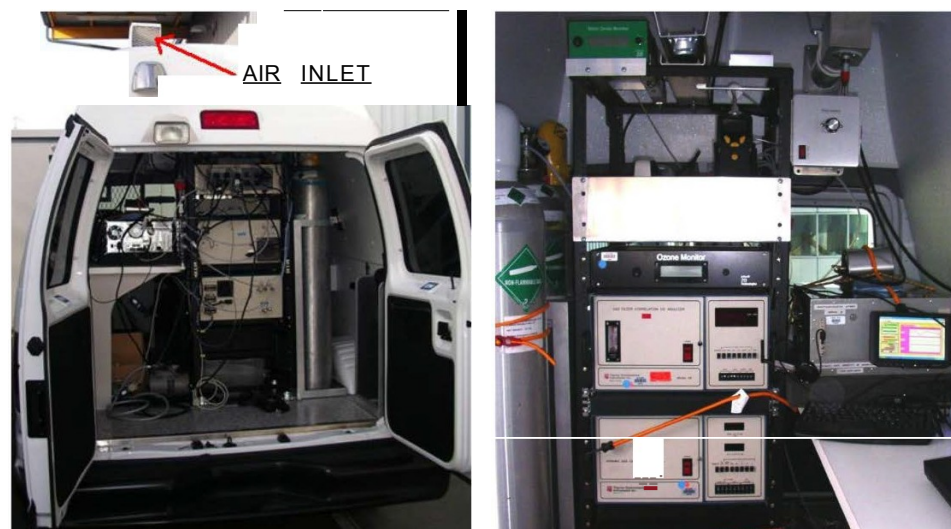




Fenceline monitoring



BAAQMD Mobile Monitoring Platform



Study Overview

- > Conducted a mobile monitoring campaign to measure annual-average traffic-related air pollution levels for the ACT cohort
- > Built UFP prediction models
- > Characterized exposure for the ACT cohort and the greater Seattle area

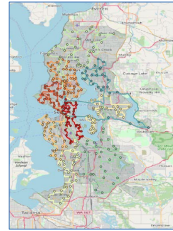


Photograph by Sarah Fish, fischs@uw.edu.



ACT Mobile Monitoring Campaign

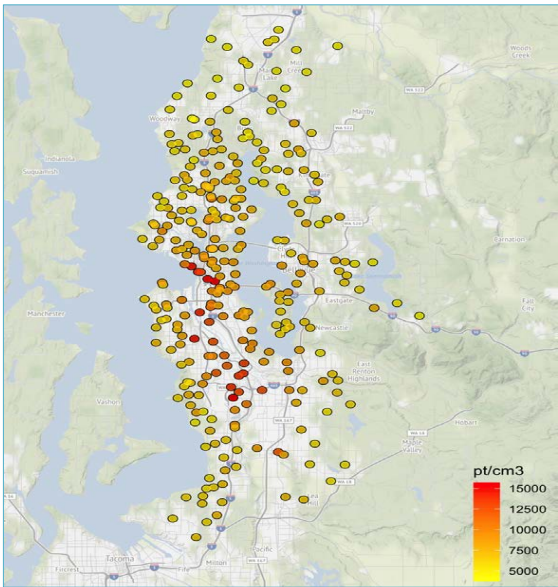
- > 309 stop locations representative of ACT cohort (large, geographically diverse area)
- > 9 fixed driving routes
- > 2-min samples per stop
- > Measured UFPs, BC, PM_{2.5}, CO, CO₂, NO₂
- > A driving schedule ensured temporally balanced sampling



Top: Jittered ACT locations and monitoring stops. Bottom: Mobile monitoring routes and stops



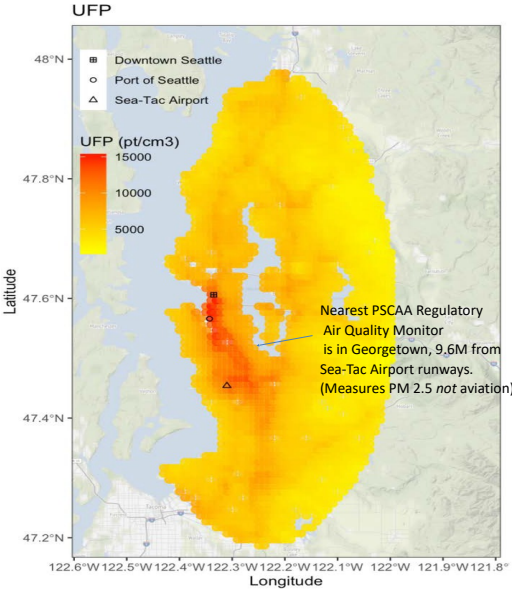
Annual Averages



Annual average UFP estimates from mobile monitoring observations.

- > Collected ~27 samples per site
 - 5 AM – 12 AM
 - March 2019 – March 2020
 - >270 drive days
- > Calculated site annual averages from the ~27 visits

Predicted UFP Map

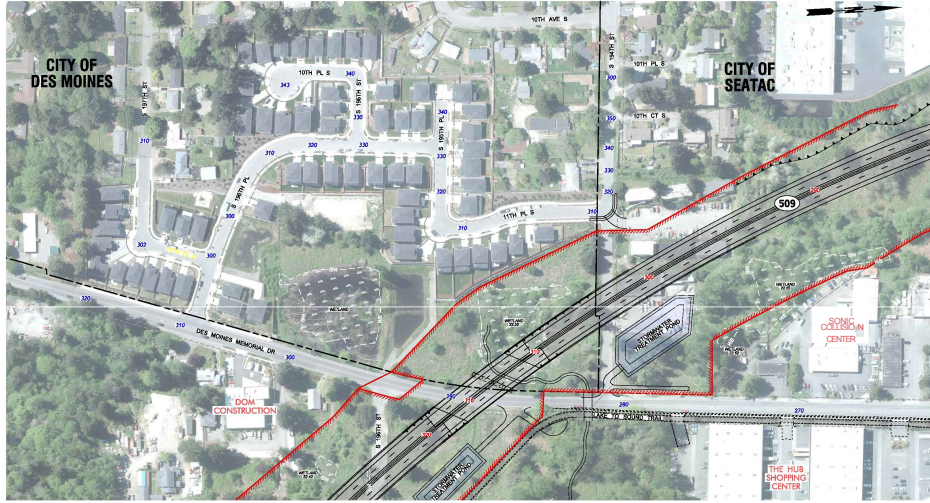


Spatial distribution of ultrafine particle concentrations in the Puget Sound region.

Pollutants associated with roadway traffic are distributed differently than ultrafine particles.

Blueberry Lane





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