

# The Yale Coastal Field Station

Guilford, CT

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School of Engineering and Applied  
Science



Yale



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## Acknowledgements:

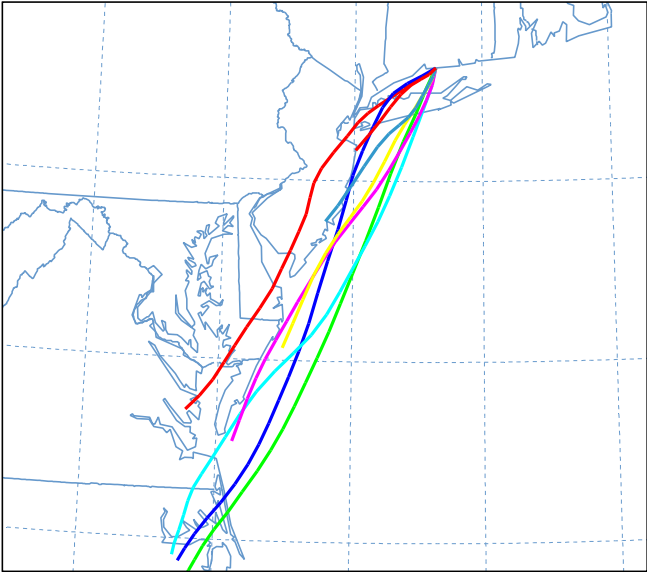
- Lukas Valin (EPA) et al.
- Pete Babich (CT DEEP) et al.
- David Wheeler and Dirk Felton (NYS DEC) et al.
- Paul Miller (NESCAUM)
- The Peabody Museum and Yale's Natural Lands Fund
- Rich Boardman, Tim White, and David Skelly (Yale/Peabody)
- Ethan Weed and Amir Bond (Peabody Evolutions Interns)
- Fred Moshery (CCNY)



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# Site Locations



Several typical trajectories of air parcels over ~1 day prior to arrival

# Measurements (reference)

## Coastal site

- $O_3$
  - $PM_{2.5}$
  - Black carbon
  - $NO_x$
  - CO
  - $CO_2$
  - $SO_2$
- Offline gas- and aerosol-phase chemical speciation via adsorbent tubes and filters (incl. speciated VOCs and OA)
  - Local meteorology
  - AERONET  
(w/ F. Moshery, CCNY)

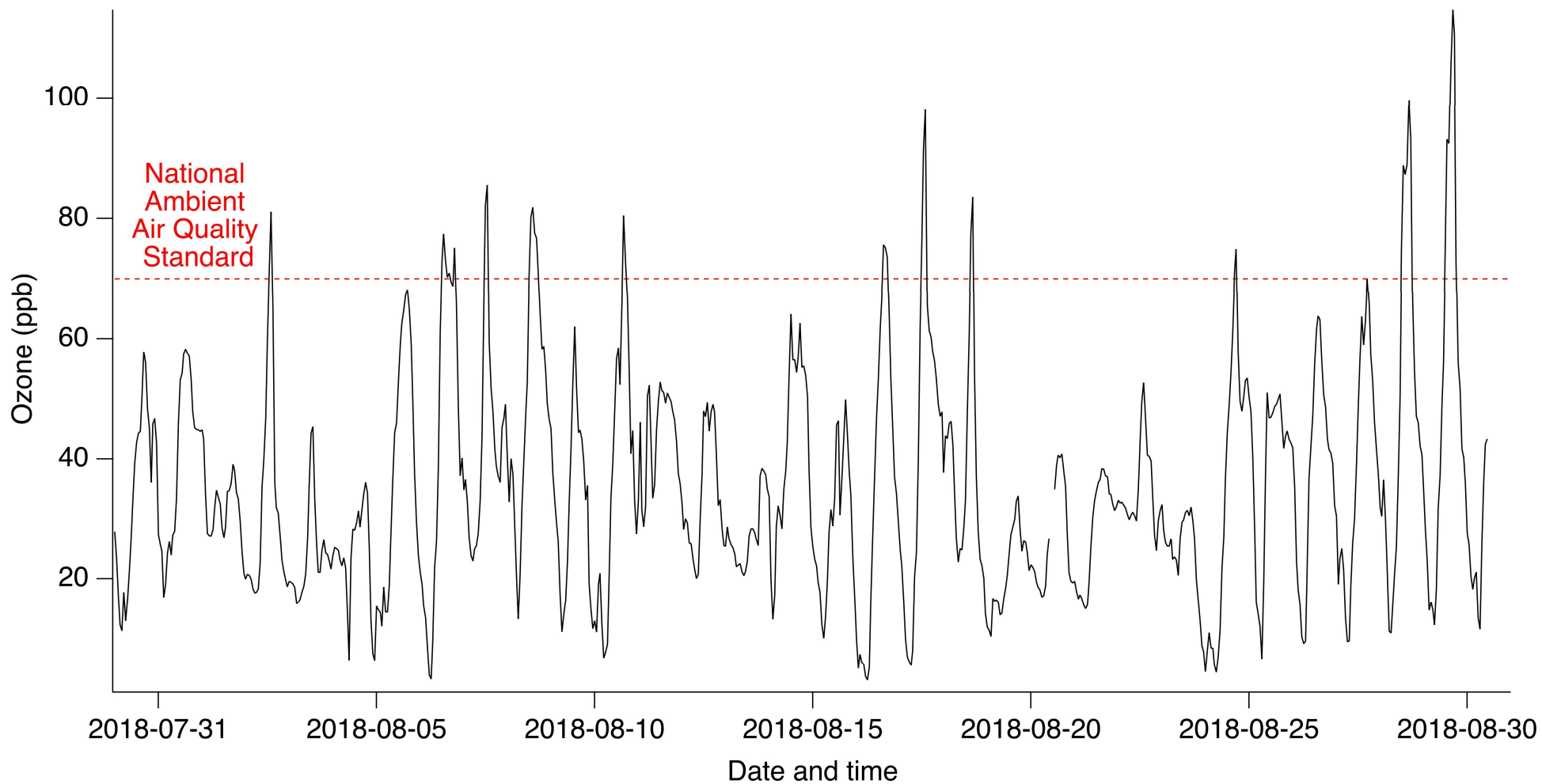
## Inland site

- Boundary layer height via ceilometer
- $O_3$

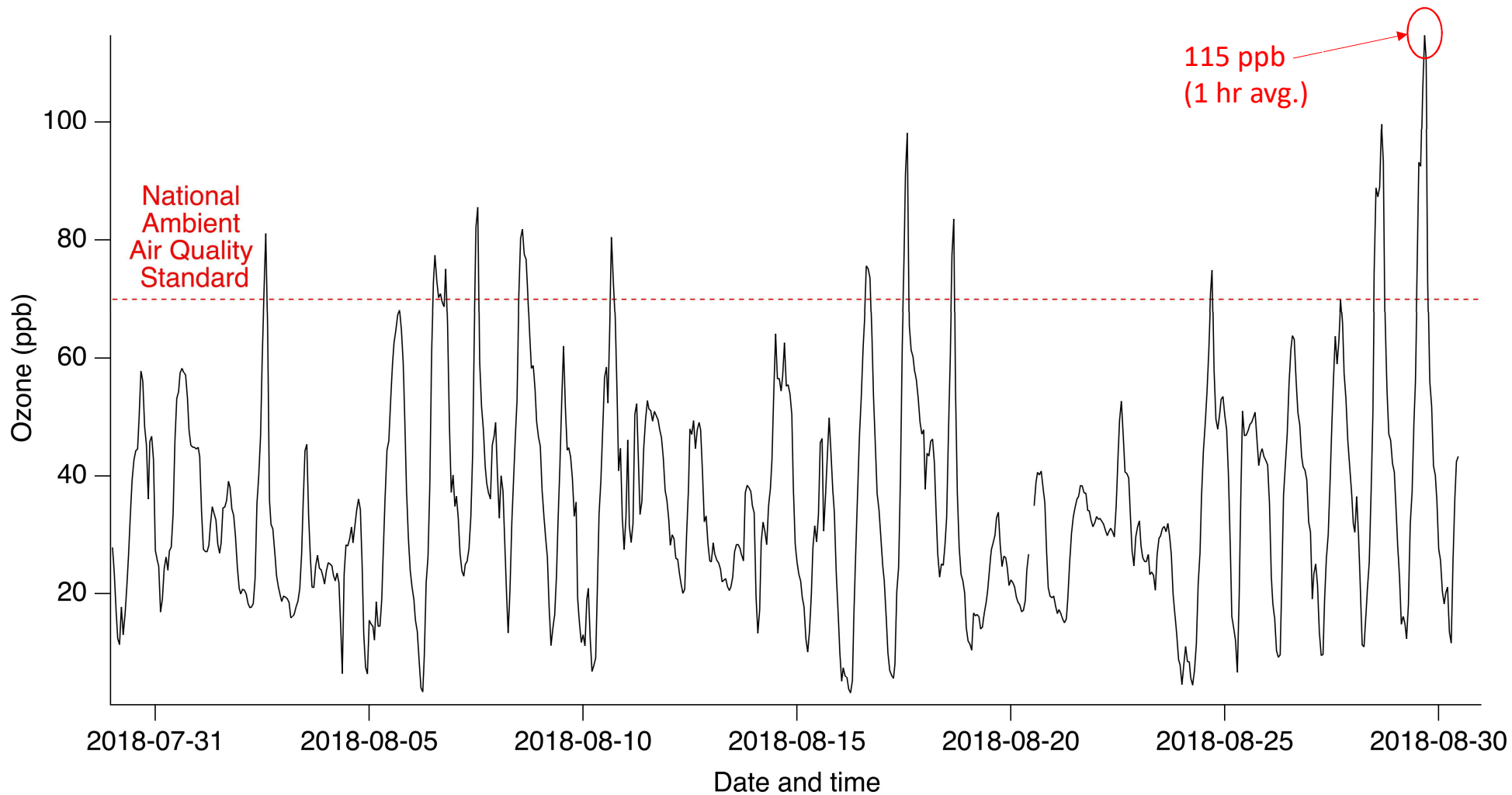
**Also in NYC with NOAA:** Offline adsorbent tubes and filters for gas- and aerosol-phase detailed chemical analysis



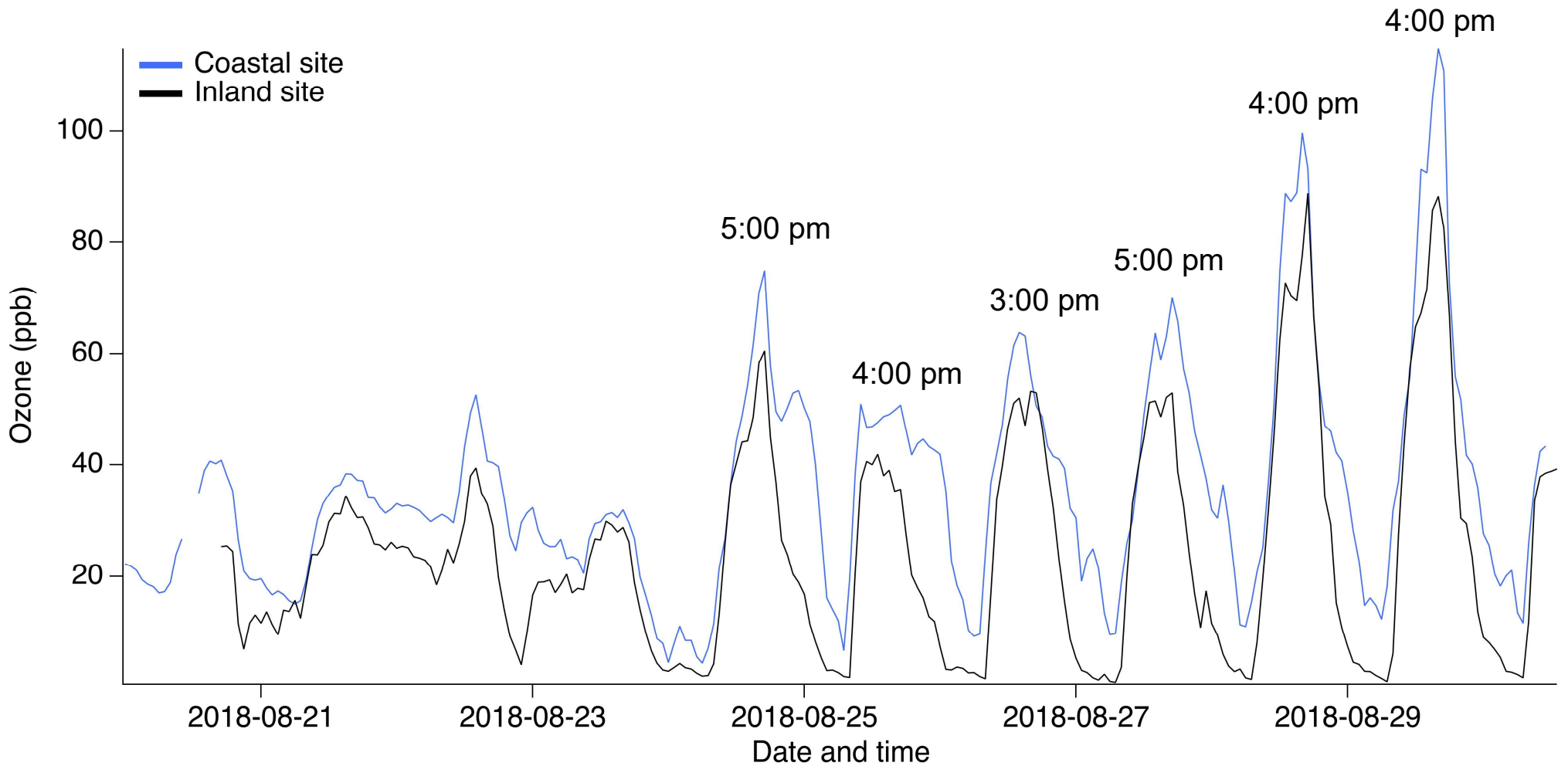
# Ozone – Coastal site



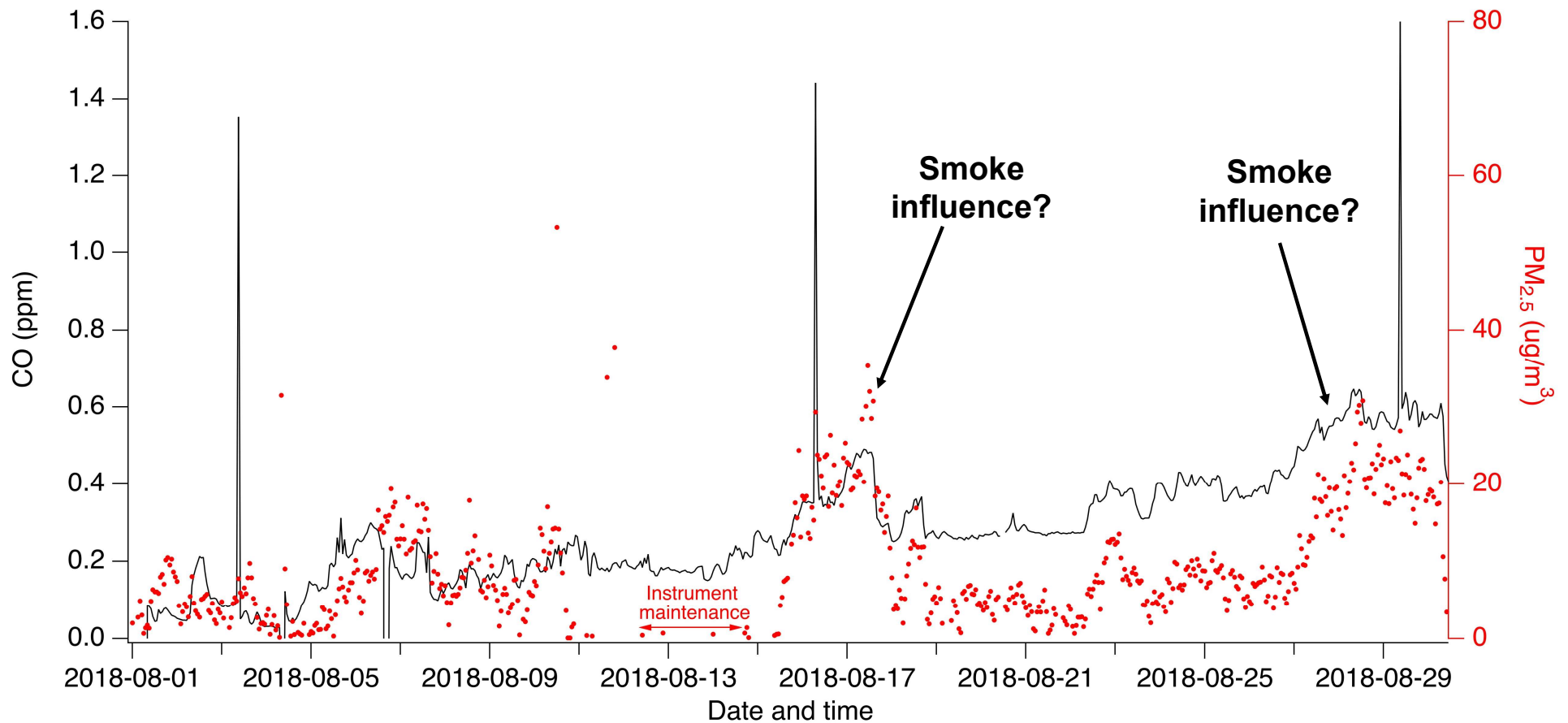
# Ozone – Coastal site



# Ozone – Coastal and inland measurements

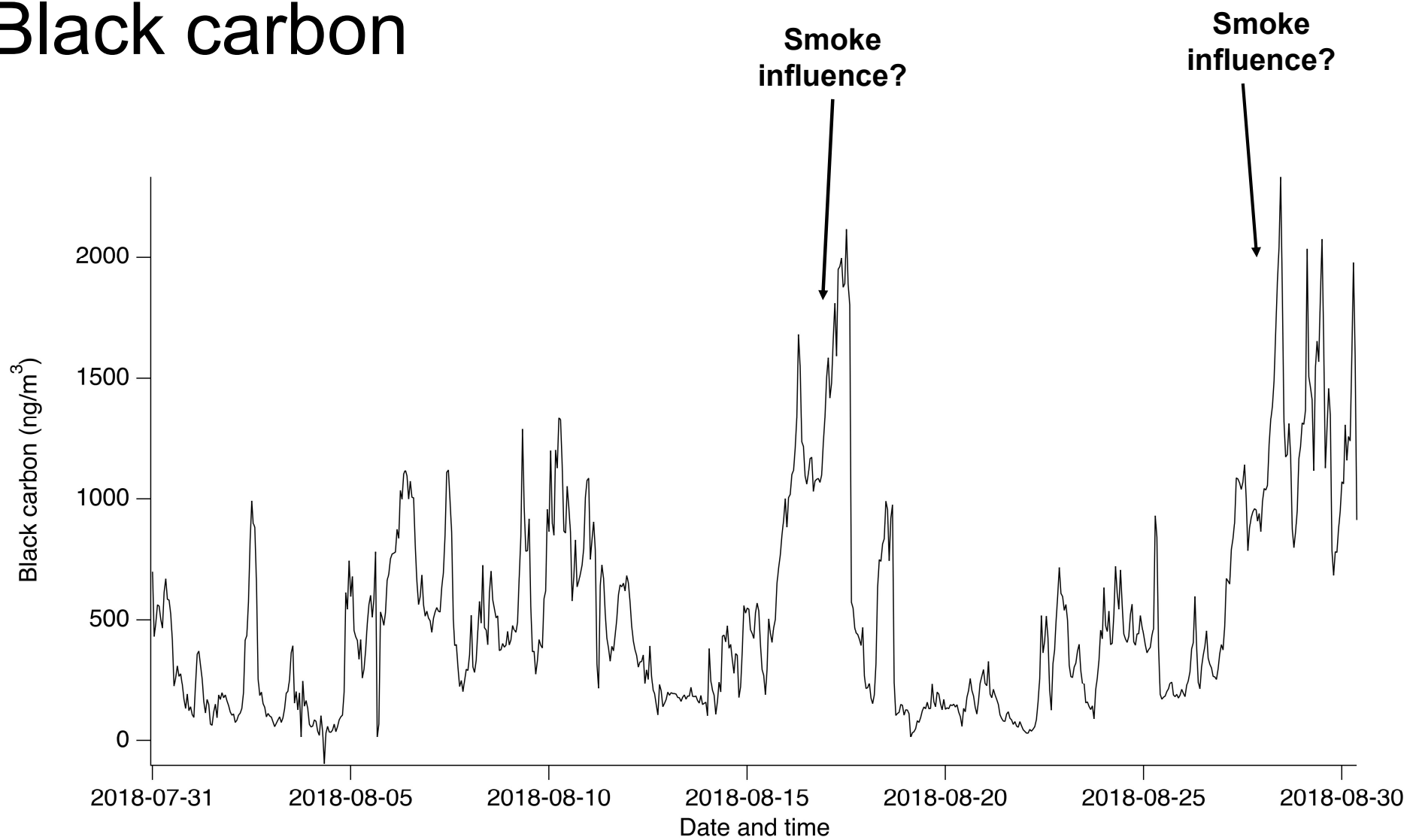


# CO and PM<sub>2.5</sub> – Observations of west coast wildfire influence at sea level?




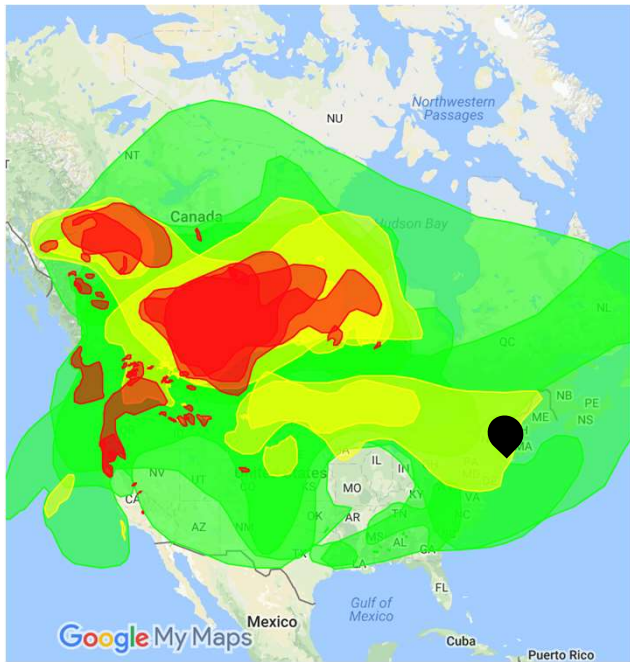


# Black carbon

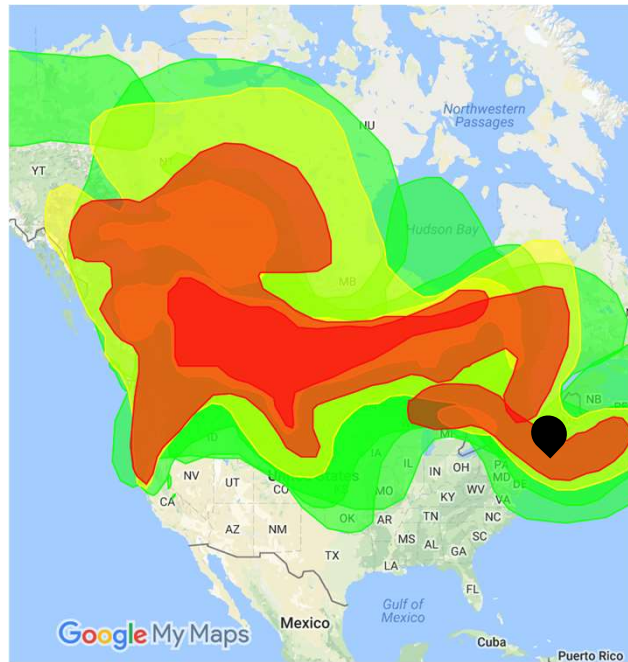


# NOAA smoke maps – Episode 1

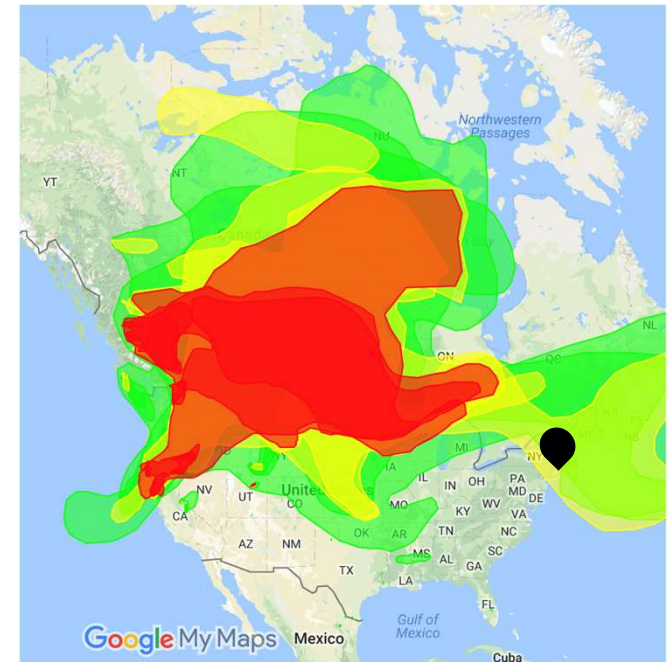
 Coastal CT Site



August 15



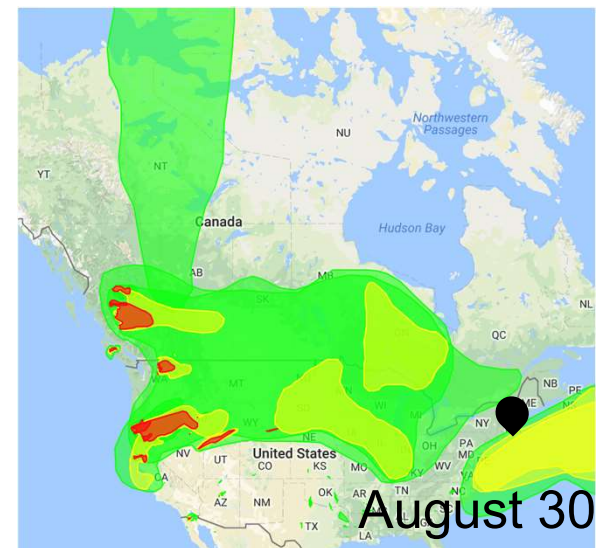
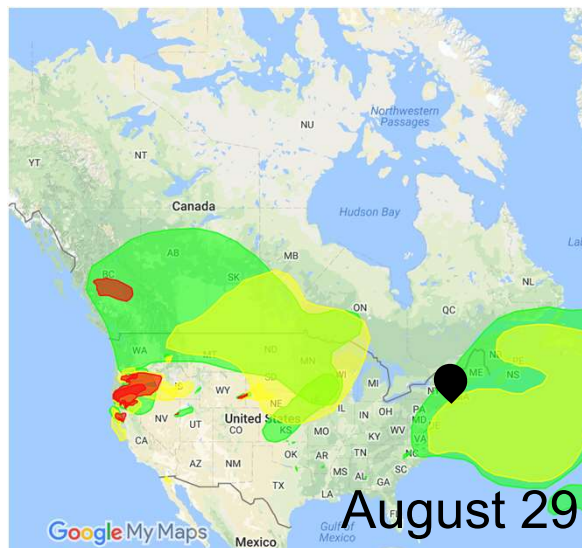
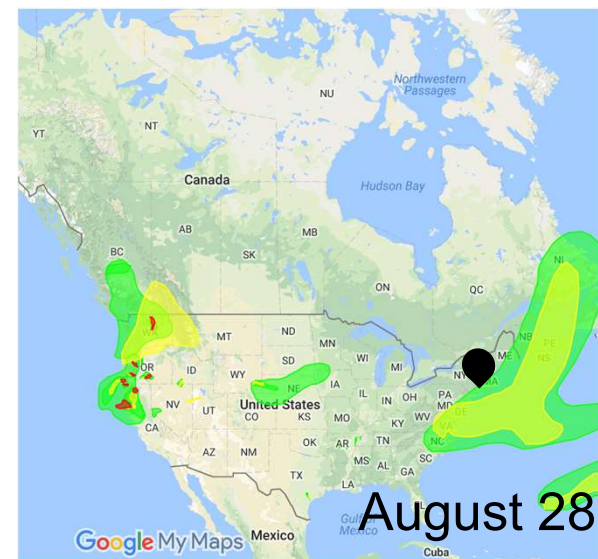
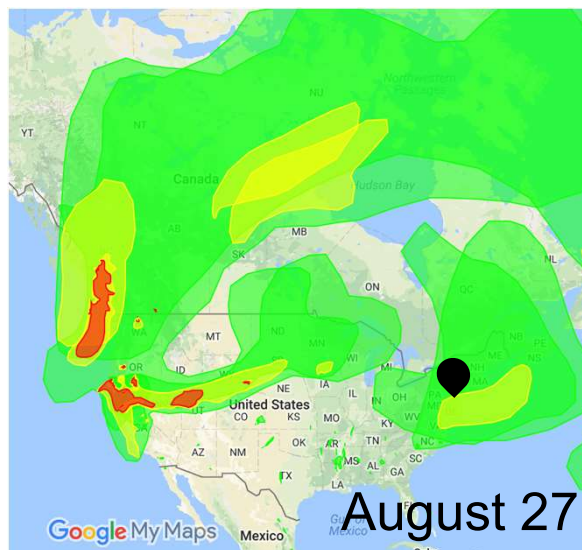
August 16



August 17

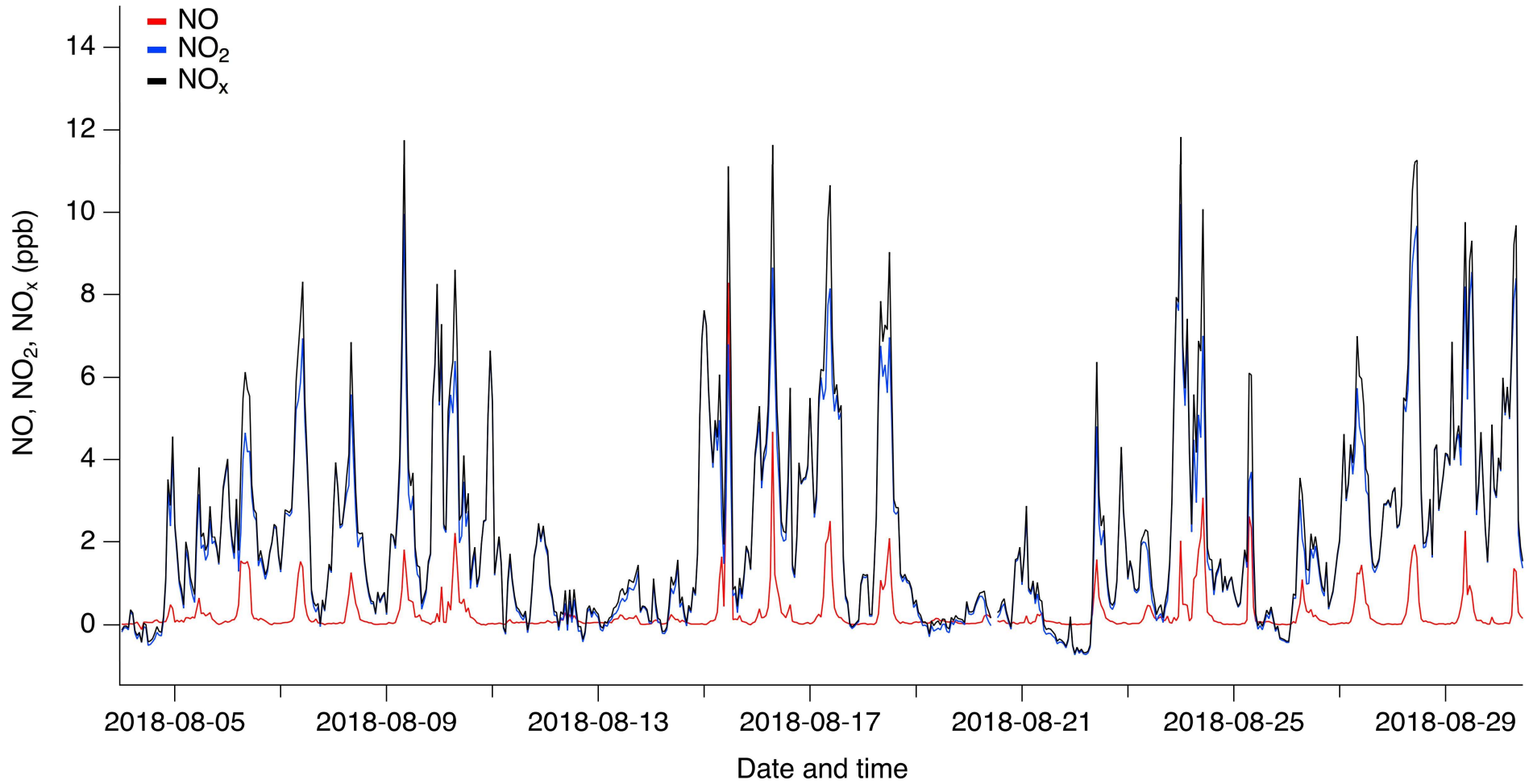
<http://satepsanone.nesdis.noaa.gov/FIRE/fire.html>

# NOAA smoke maps – Episode 2



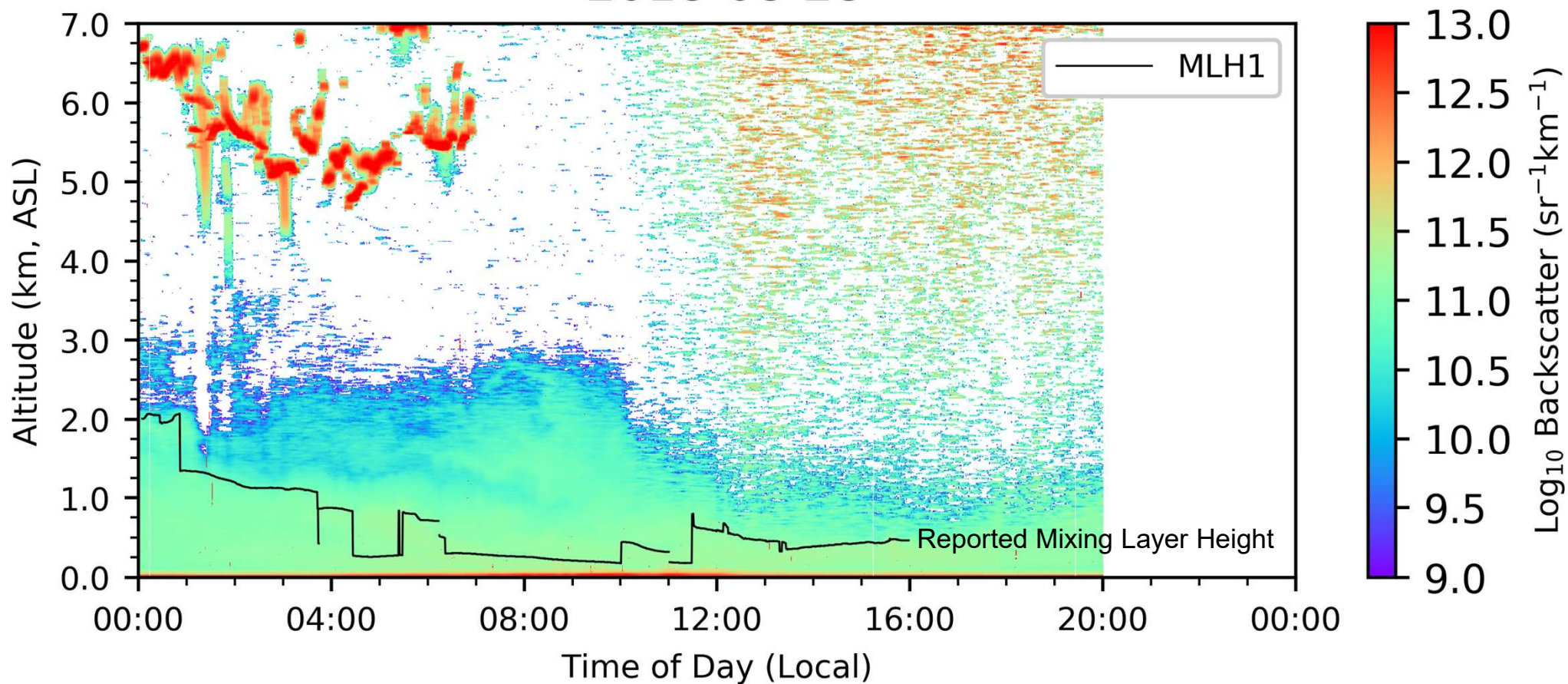
 Coastal CT Site

# NO<sub>x</sub> Preliminary data



# Boundary layer measurements – Inland site

2018-08-28



# Summary - Measurements

## Coastal site

- $O_3$
  - $PM_{2.5}$
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  - CO
  - $CO_2$
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- Boundary layer height via ceilometer
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