NESCAUM

AGU 100 ADVANCING EARTH AND SPACE SCIENCE | FALL MEETING Washington, D.C. | 10–14 Dec 2018

NOx and the City

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NORTHEAST STATES FOR COORDINATED AIR USE MANAGEMENT (NESCAUM)

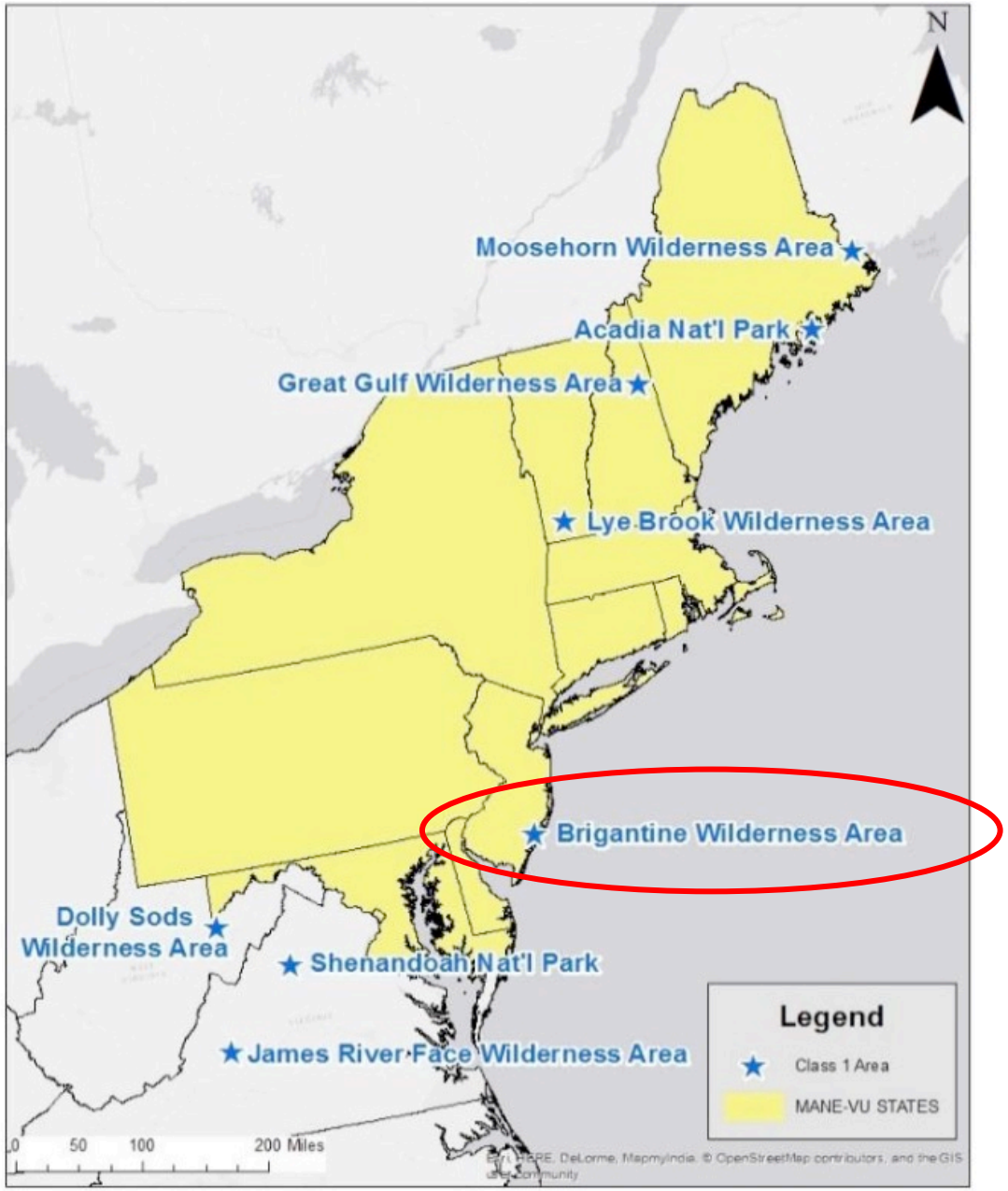
HAQASTA5

PHOENIX, AZ

JANUARY 3, 2019

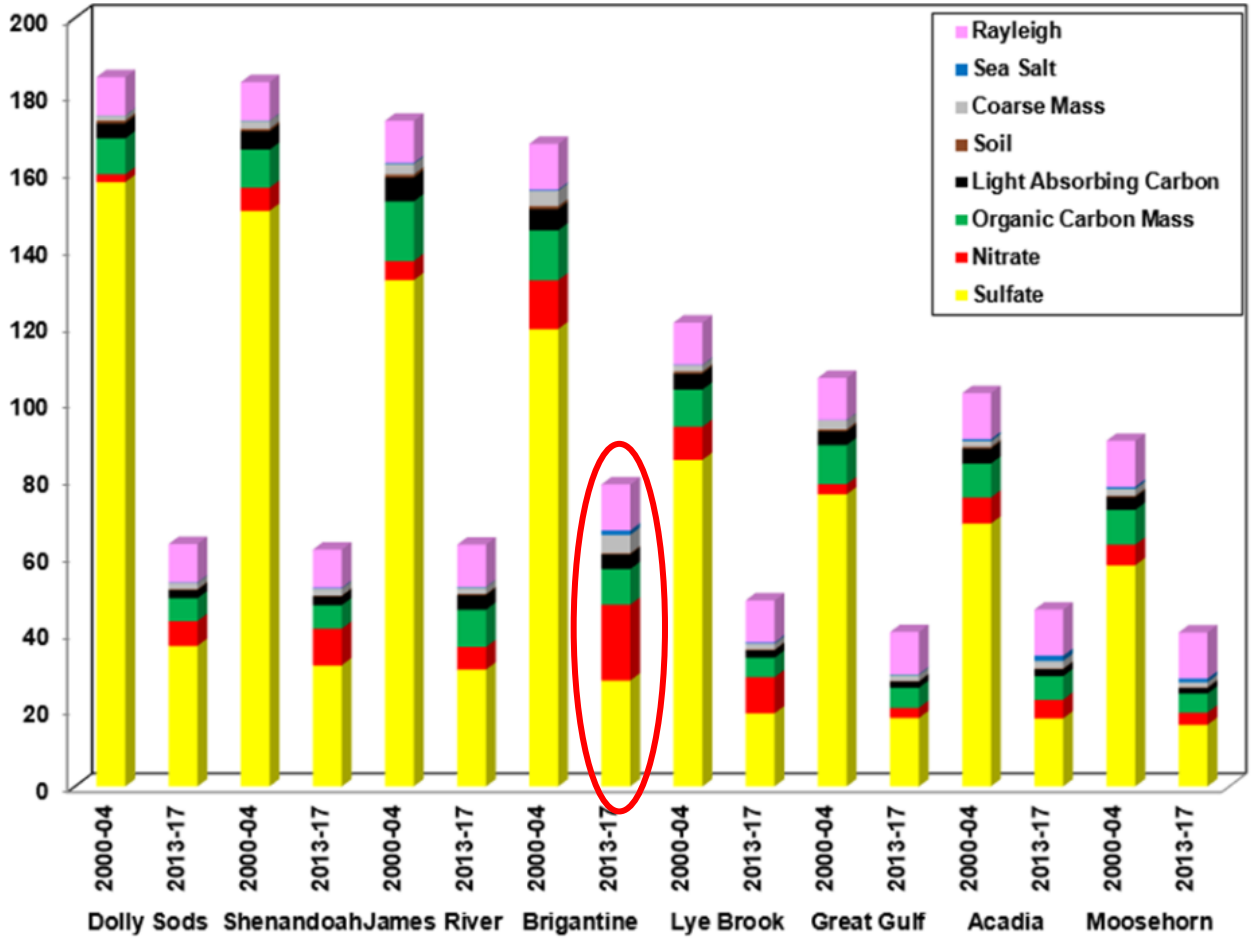
Mid-Atlantic/Northeast Visibility Union (MANE-VU) Status

- State SIPs are currently being written and will be submitted well before 2021
- Sulfates and nitrates are the dominant RH species in MANE-VU region
  - Nitrate share growing as sulfate decreasing
- OCM, LAC and CM are near natural conditions; occasional long range transport of wildfire smoke



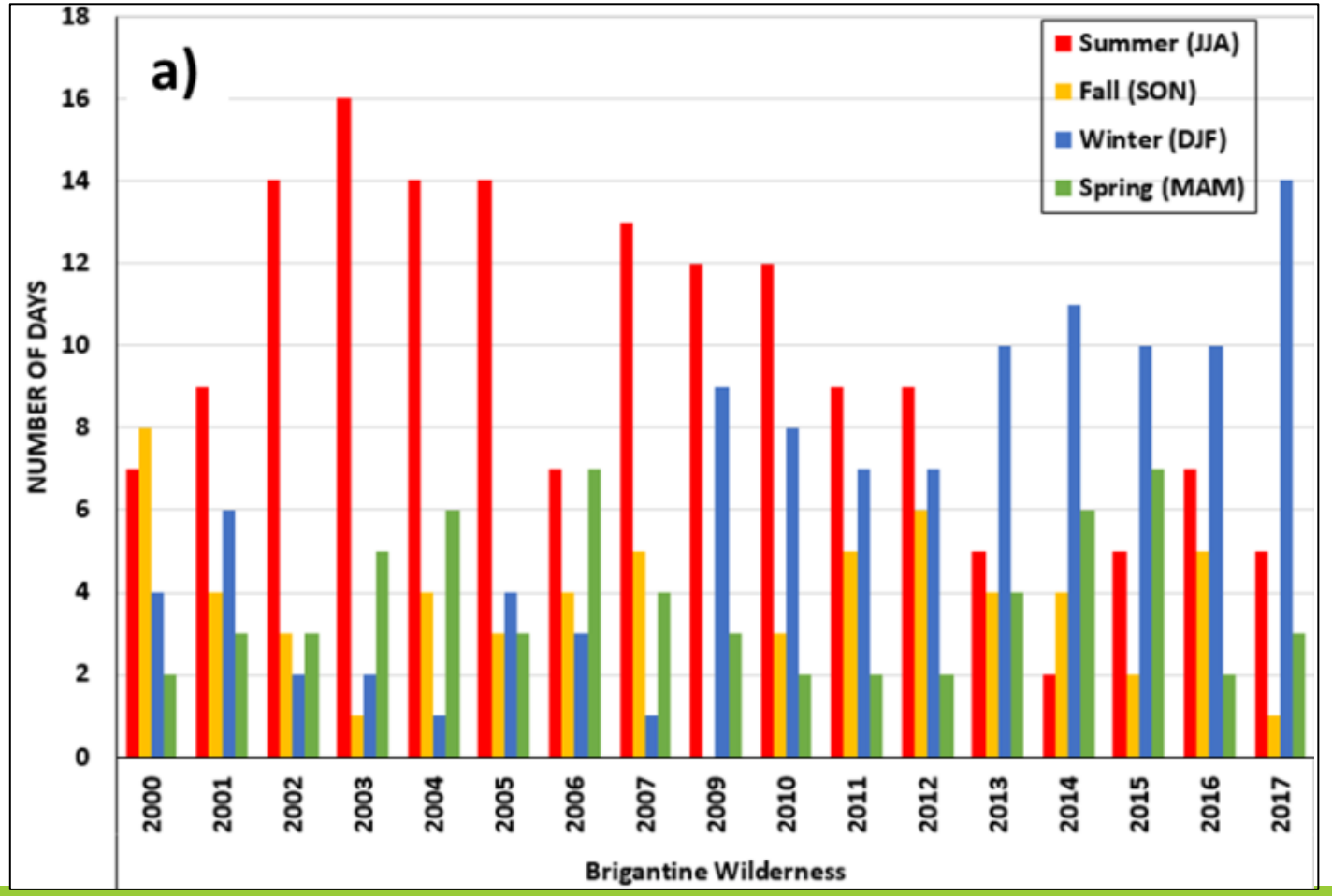
Class I Sites in MANE-VU and to West

20% Most Impaired Visibility Days: 2000-04 vs. 2013-17

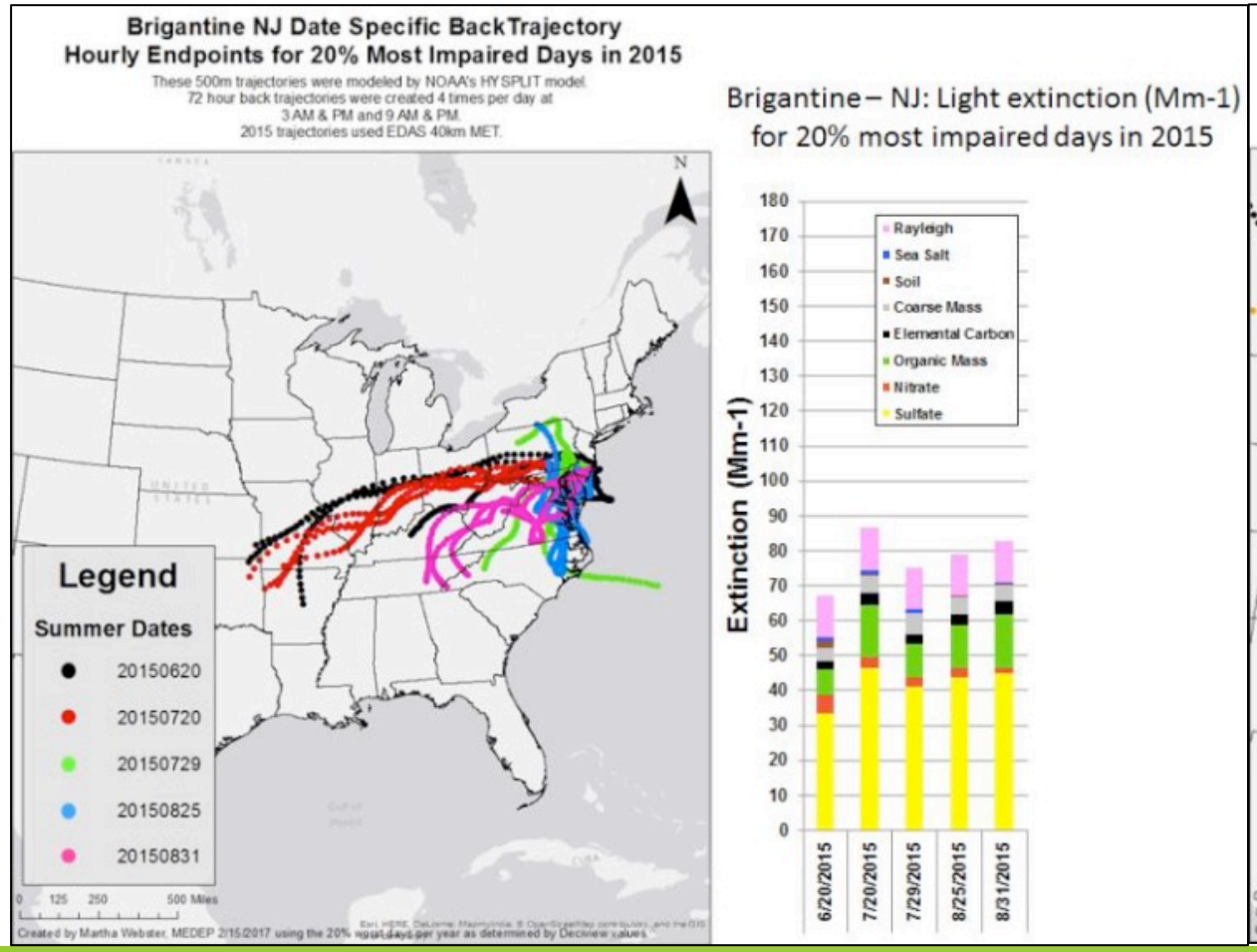


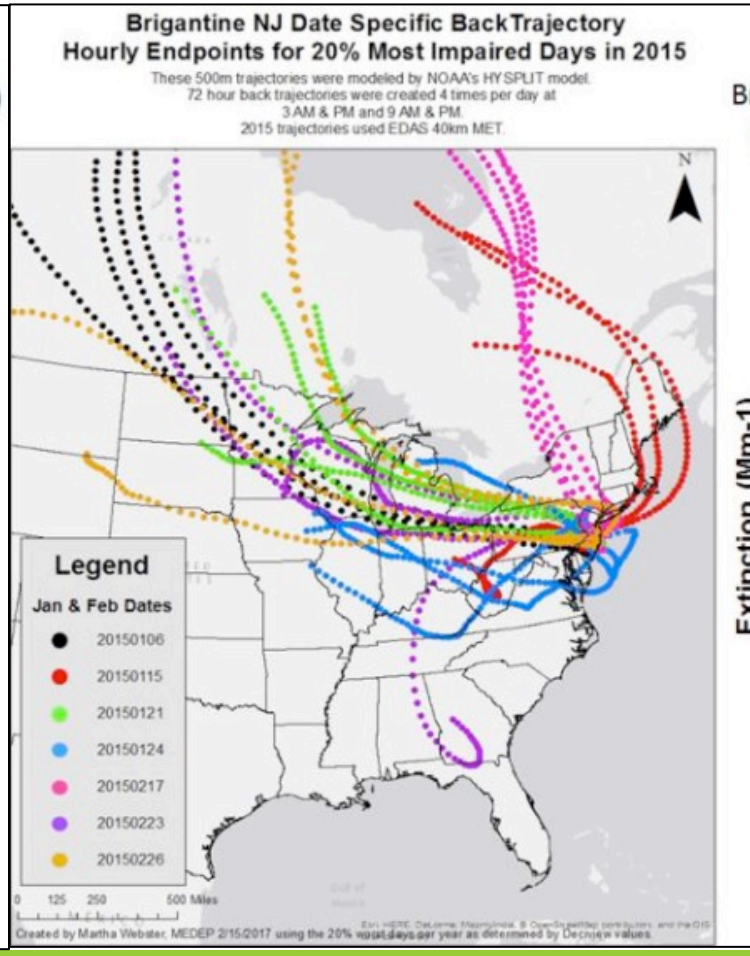
- Brigantine now more impaired than Class I areas closer to large coal power plants
- Has largest nitrate share

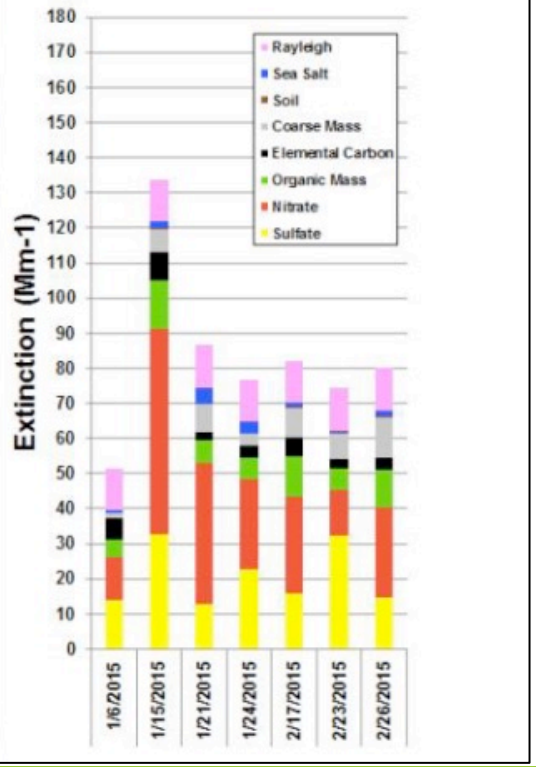
Brigantine 20% Most Impaired Days by Season 2000-2017



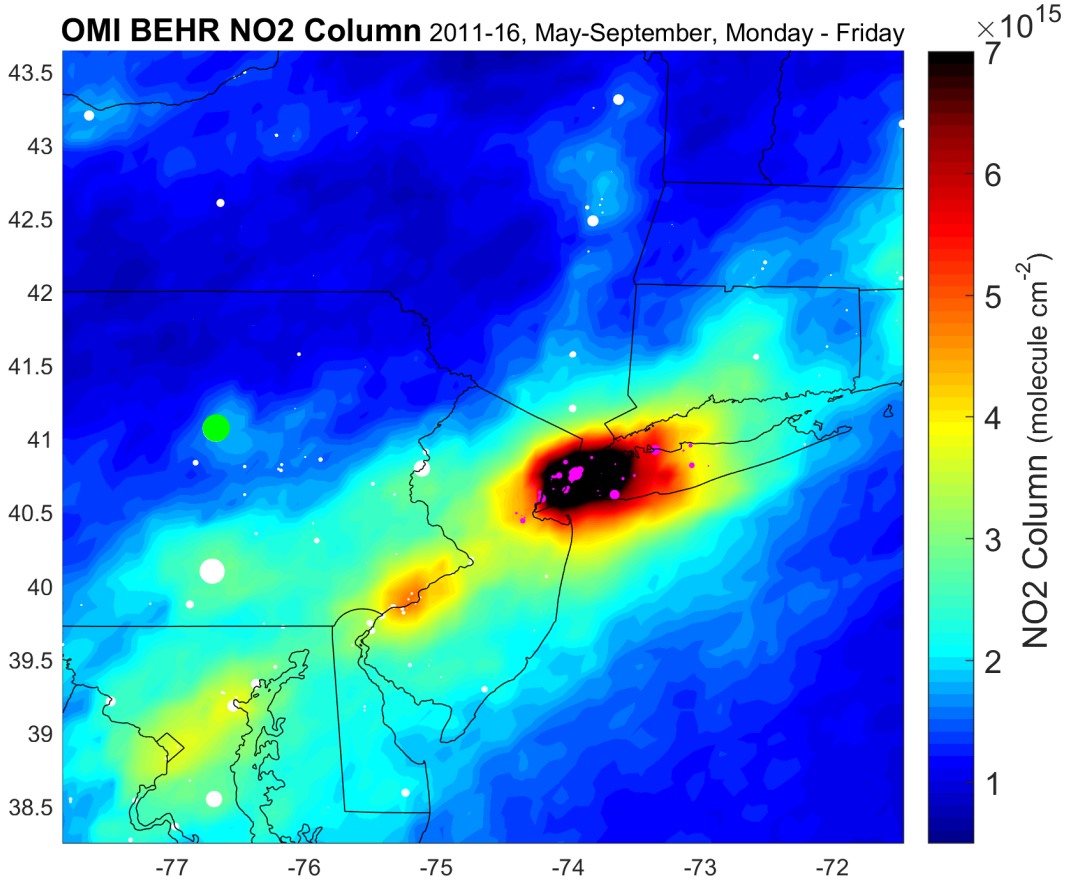
Summer/Winter 2015 Trajectories on 20% Most Impaired Days





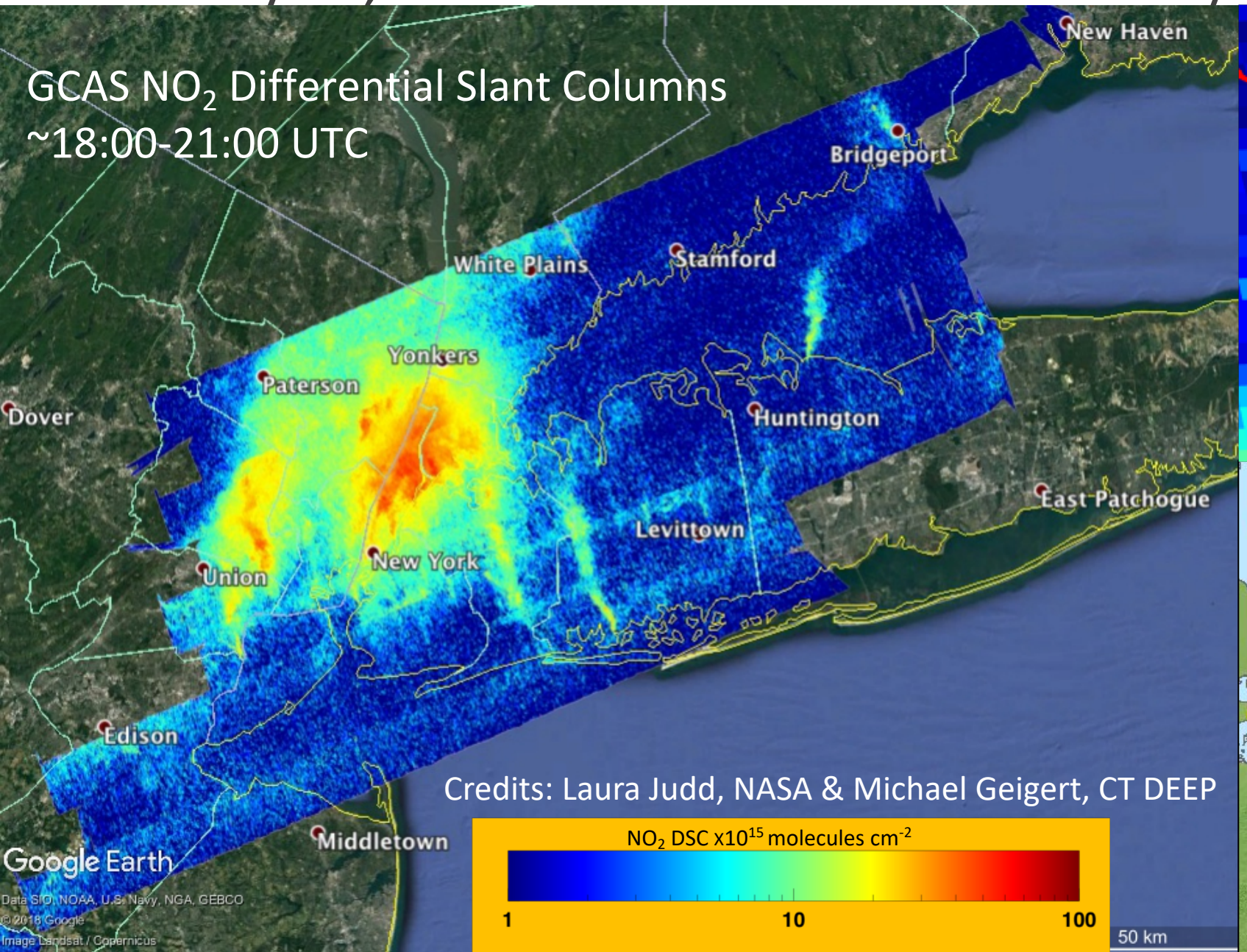


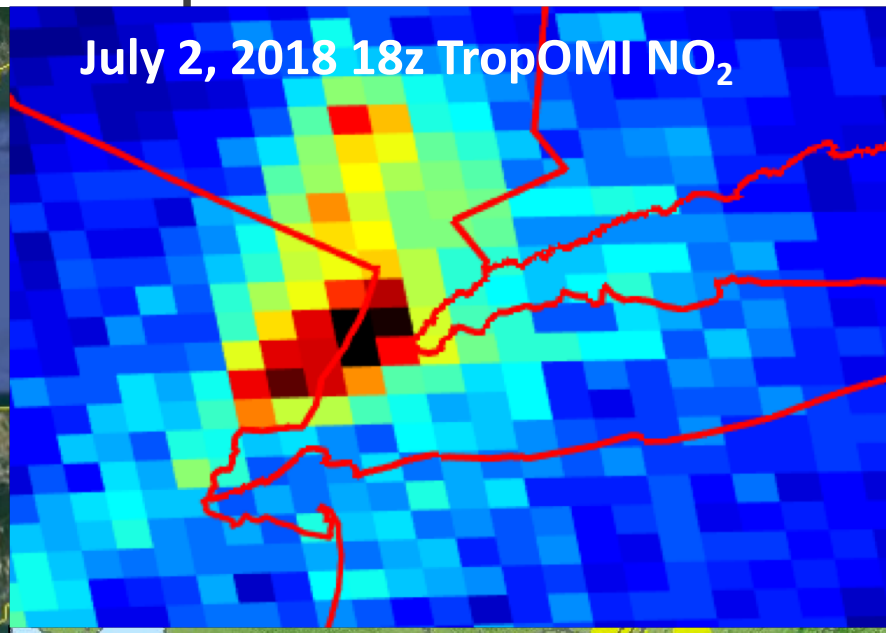
A NYC NO_2 "Volcano" – OMI

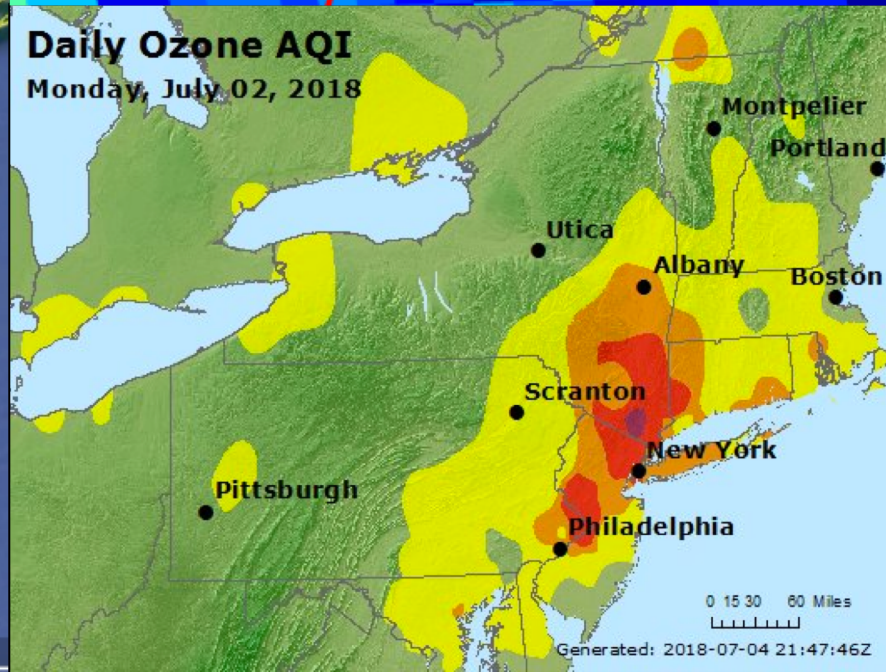


Credit: Luke Valin, EPA

July 2, 2018 Afternoon GCAS/TropOMI





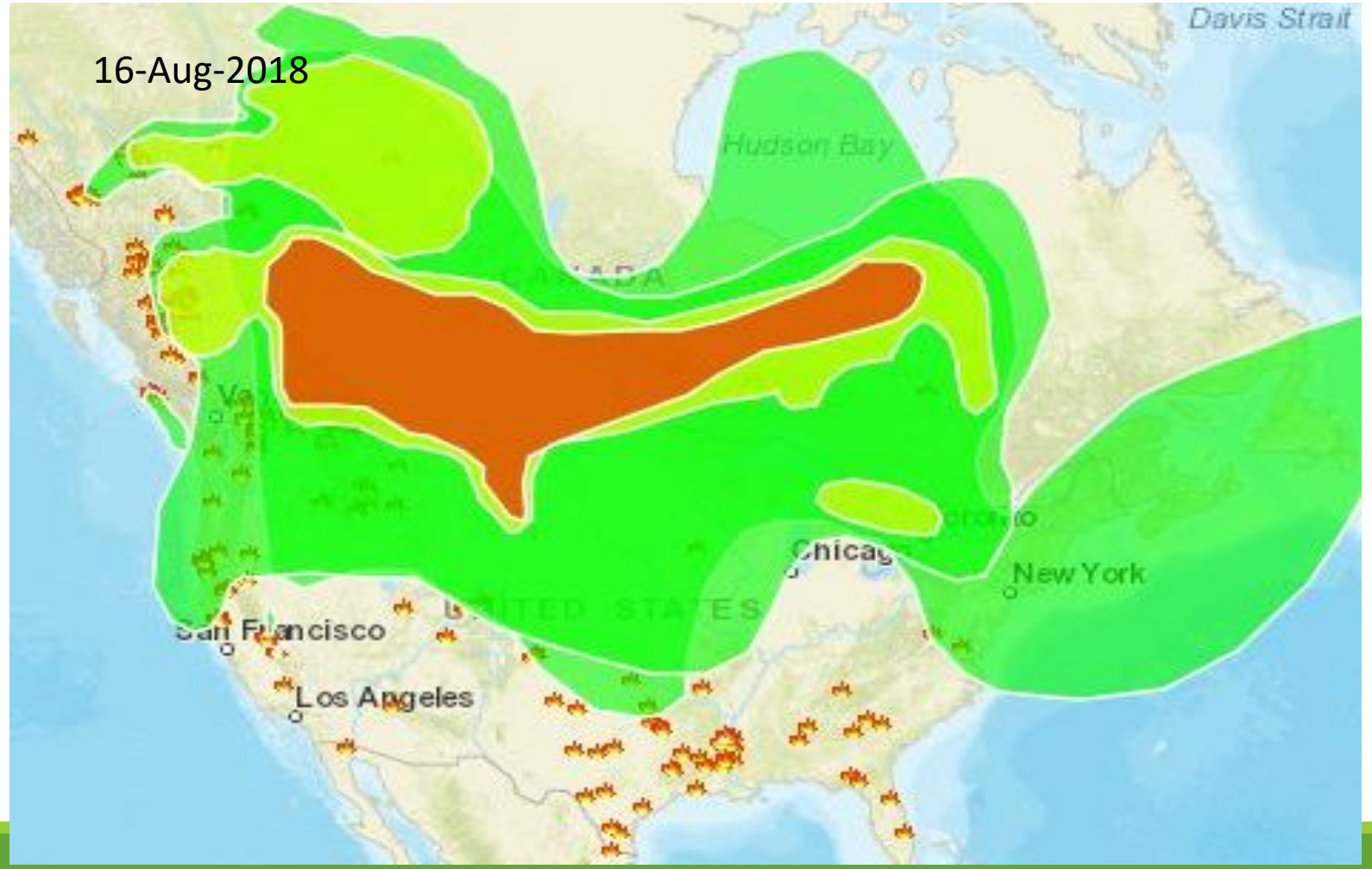


Haze Questions

- Is winter nitrate from the NYC plume?
- Or is it “local” in NJ?
- Does Ohio Valley NOx have impact?

Smoke

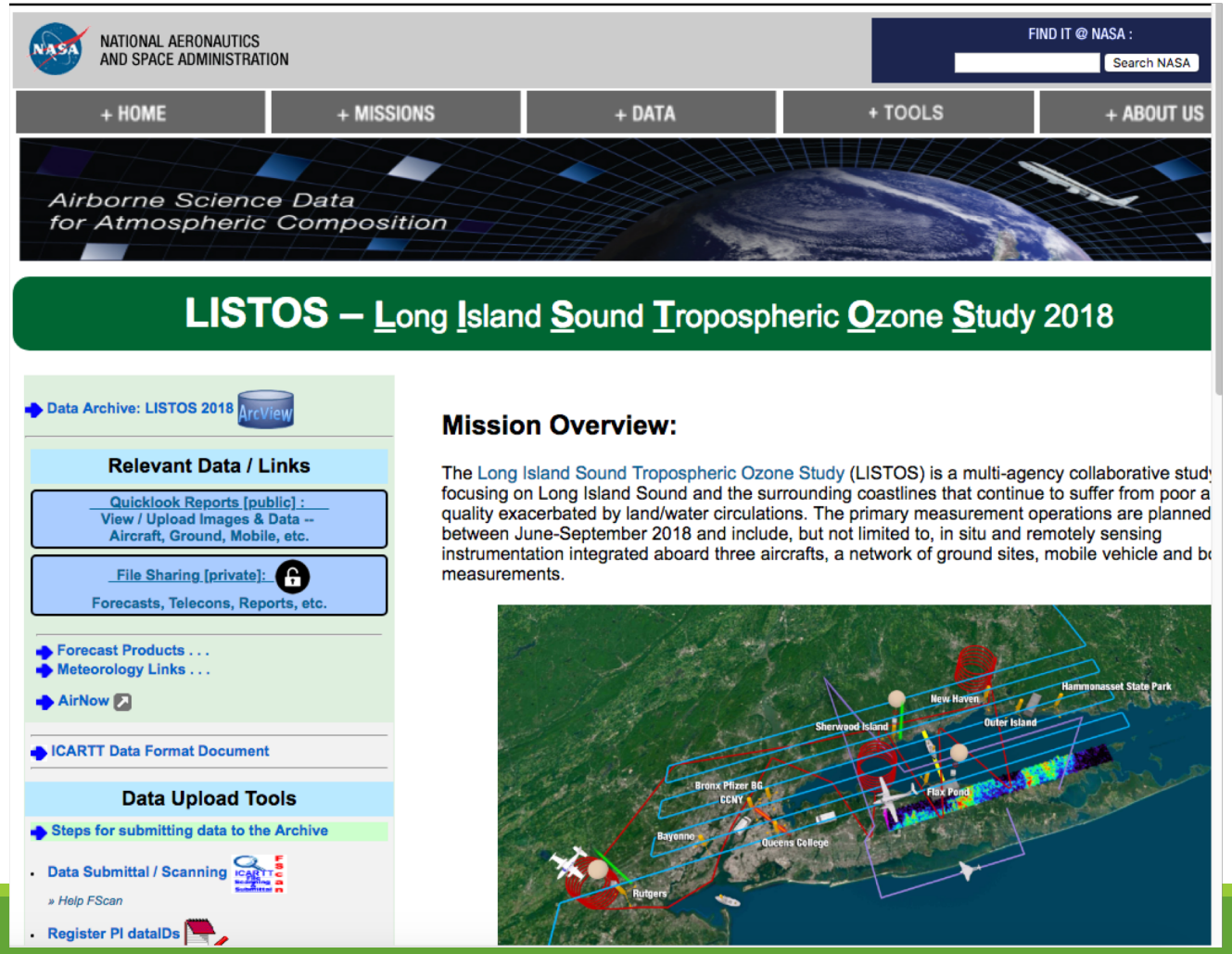
Western Smoke Plumes in Summer 2018



Fires and smoke (color) from NOAA Hazard Mapping System (HMS) https://www.ospo.noaa.gov/Products/land/hms.html

July 2, 2018 Compared to Clean Day

LISTOS Data Archive in Development



The website is located at:
https://www-air.larc.nasa.gov/missions/listos/index.html

Thank you

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Executive Director

NESCAUM

617-259-2016

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