

What to do if There are Few Fires?

Fire Plan

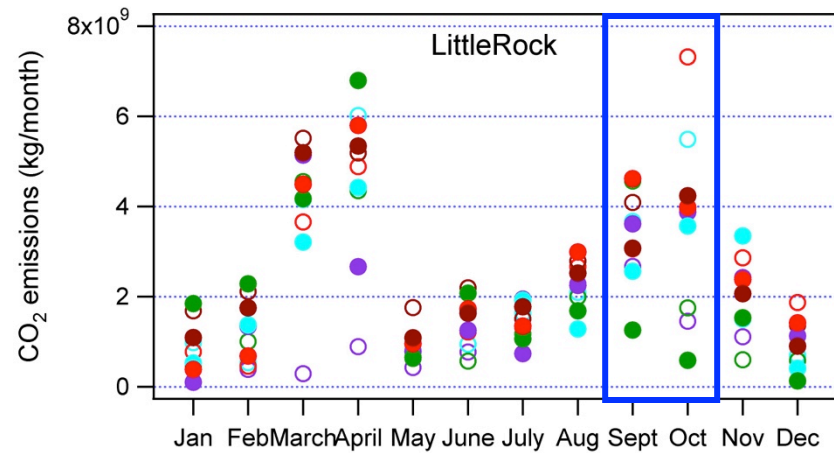
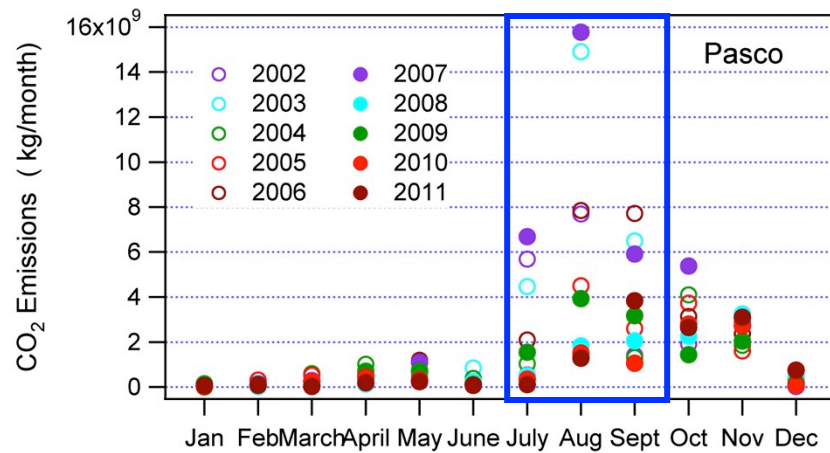
Major focus is to sample fires in near-field where there are rapid changes, with a particular emphasis on soot, brown carbon, and SOA

This includes sampling other sources for contrast
Urban, Long range transport

Plan B

Same instruments can be used for multiple purposes

Year to Year Burn Variability

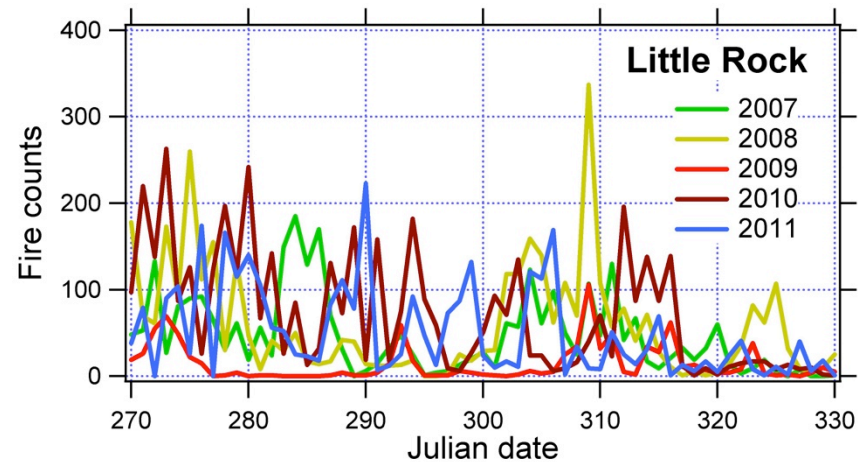
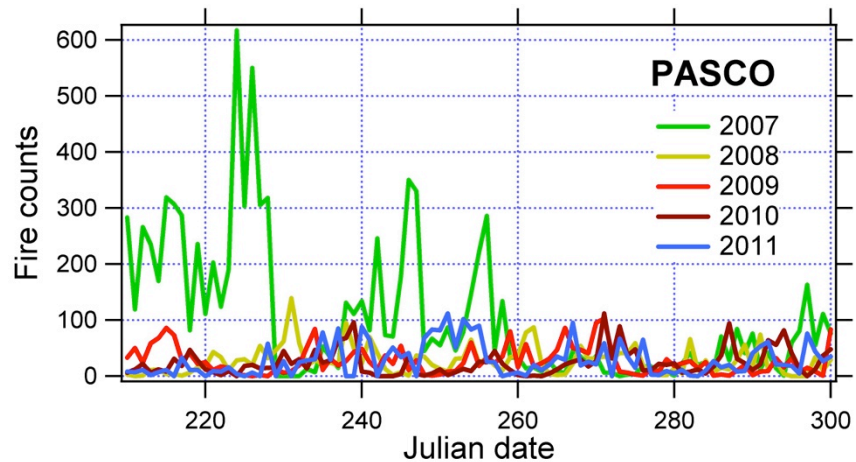


Areas are ~ 1000 km by 1000 km centered on Pasco, WA and Little Rock, AK

Year to year variability in Monthly Fire Emissions ~ factor of 10.

Fire Data from FINN version 1.0, courtesy of Christine Wiedinmyer

Year to Year Burn Variability



Large year to year variability in Fire Counts

Sometimes, 2 week periods between fire activity

Fire Data from FINN version 1.0, courtesy of Christine Wiedinmyer

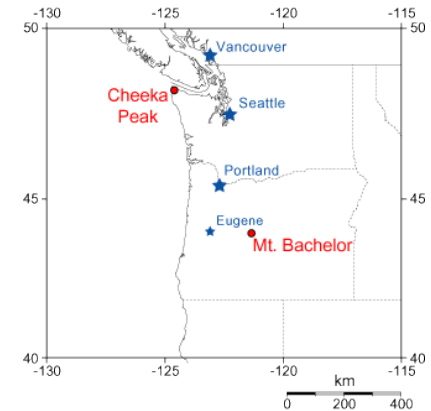
Other Soot/Brown Carbon Sources

Urban

Portland population = 2.3 million compared with 2.2 for Sacramento (CARES)
Nearby to Pasco, Class C airspace

Long Range Transport

Collaboration with Dan Jaffe's group at Mount Bachelor



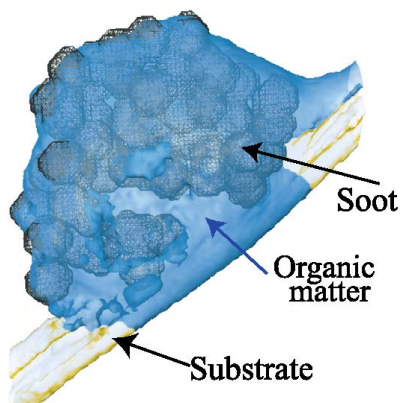
Also a possible location for instrument intercomparisons

Possible LRT from Mexican or Canadian fires in SE U.S.

Possible prescribed burns at **Eglin** Air Force Base, FL
has morphed into possible satellite underpasses
Collaboration with Charles Ichoku and NASA folk

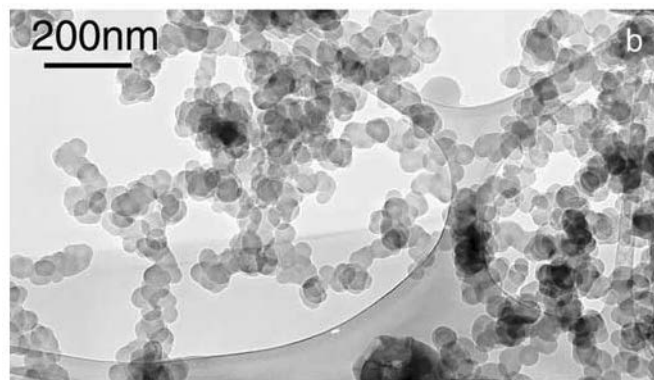
Other Soot/Brown Carbon Sources

Will morphology and coating of soot be different?

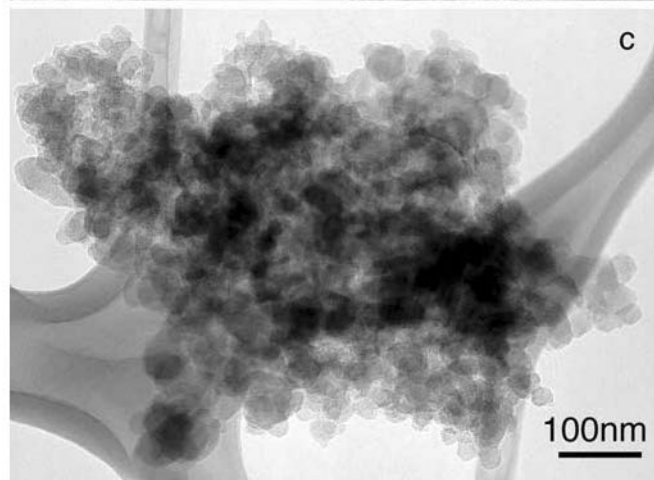


Urban: Mexico City
Host particle with embedded soot.

Adachi et al JGR, 2010



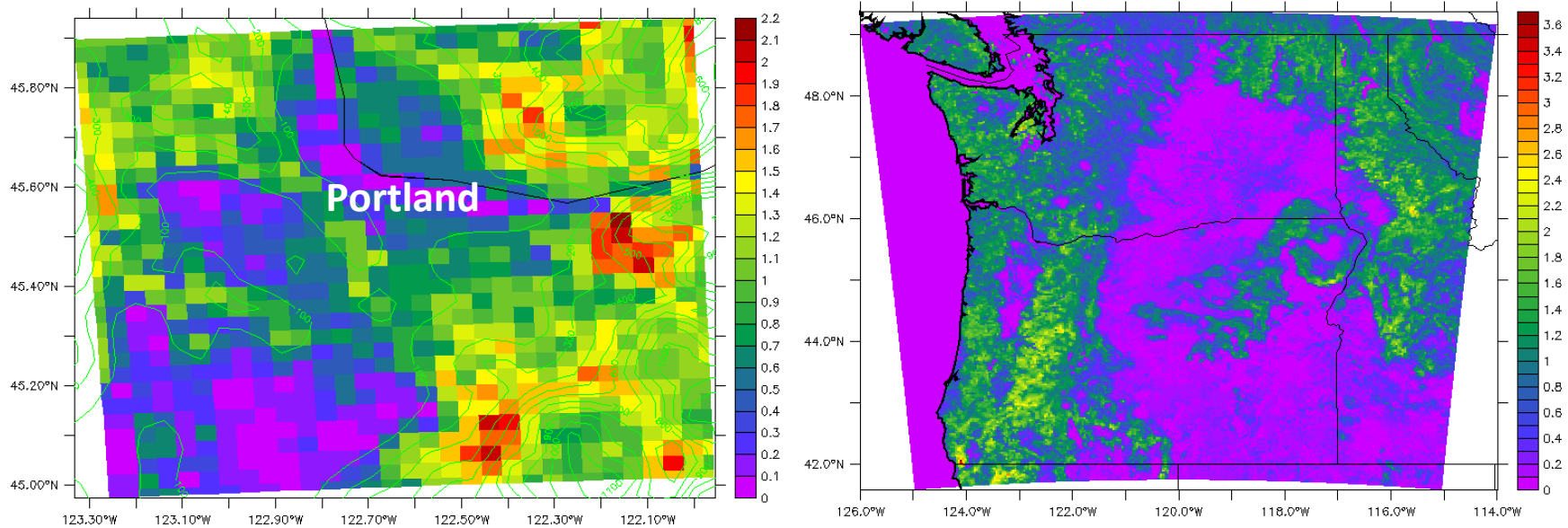
flaming smoke



compact soot aggregate
regional haze

Li et al JGR, 2003

A-B Interaction in Portland Plume

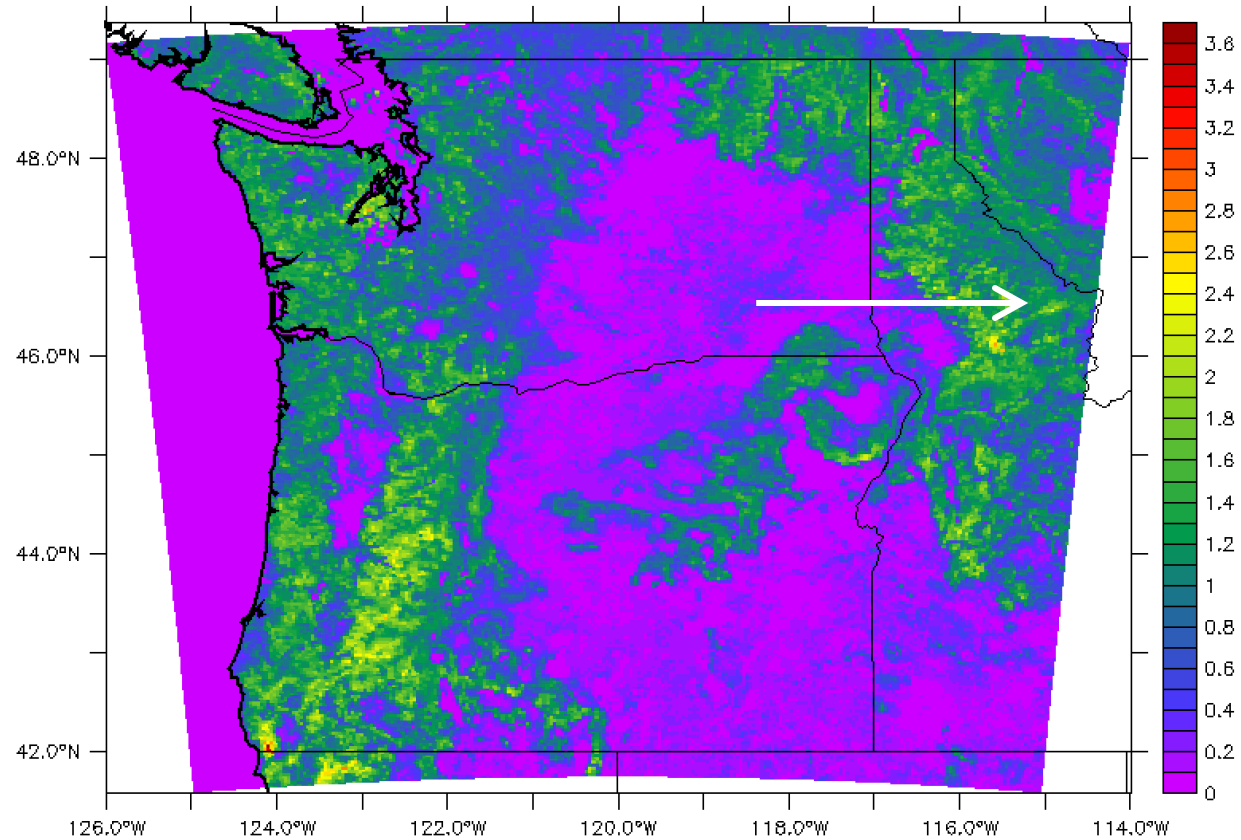


Similar to CARES, except that biogenics primarily terpenes
Comparisons to CARES useful

Terpene emission rate, 02 UTC July 04.

A MEAGEN-WrfChem calculation by Jerome Fast

Gradient Flights



terpene emission rate, 02 UTC July 04, Jerome Fast

Seasonal Effects on Aerosol

SOAS (NSF) and SENEX (NOAA) will be based in SE U.S June-July

Surface site in Centerville, AL
C130 and P3 in Nashville

Discussions underway as to how measurements by G-1 in Sept & Oct
(with much lower biogenic emissions) can provide a fuller picture
of roles of biogenics and A-B interactions in aerosol production & properties

Breaking News

SEAC4RS will not be going to SE Asia

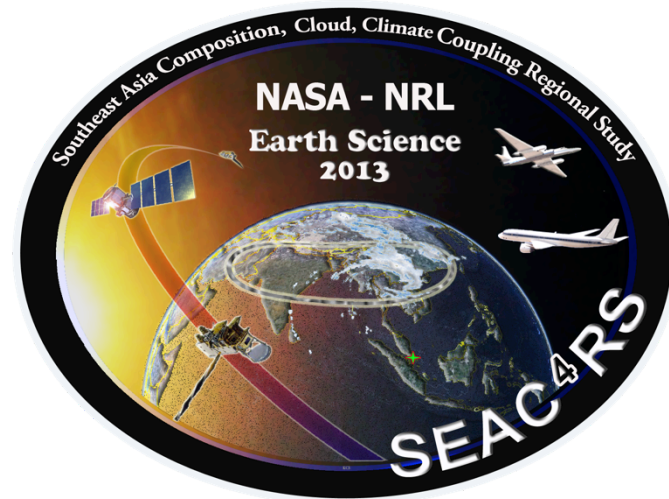
Will be in continental U.S.

Possibly southeastern or western U.S.

Possible CIRPAS Twin Otter

Possible overlap with G-1

Judging by logo, they have lots of stuff



Thank you

Impressionist

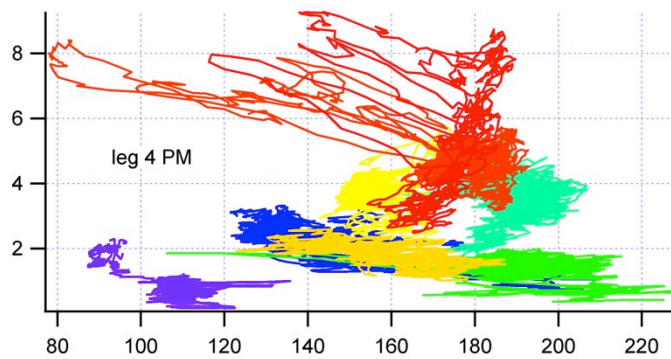


Post Impressionist



Actual Atmospheric Data from Igor

Abstract



Abstract Expressionism

