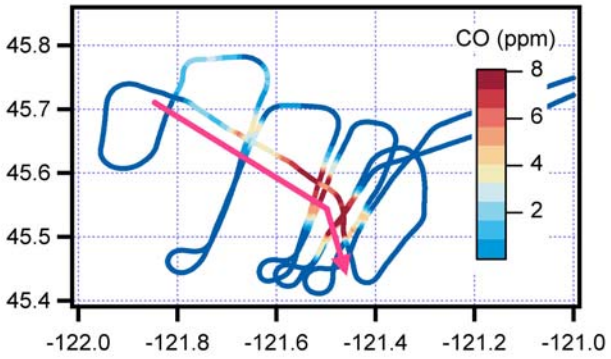
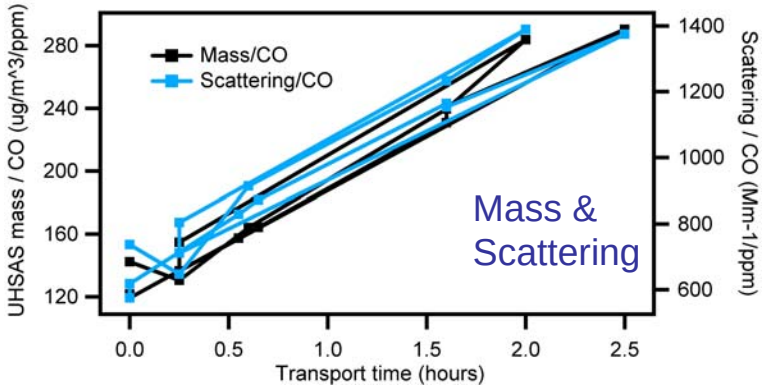
SOA Formation and Aerosol Size Distributions

Government Flats, largest fire sampled

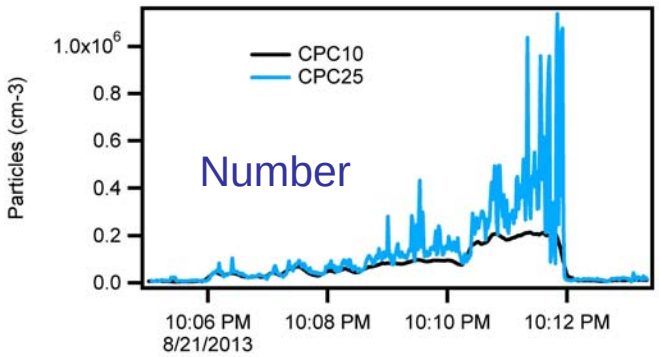
2.5 hours pseudo-Lagrangian transport
Normalize to CO to account for dilution



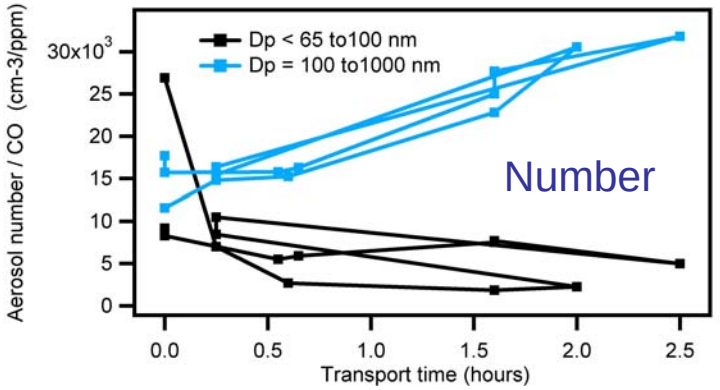
Aerosol Mass and Scattering increase by factor > 2
Each data point is a Transect Average..



>10^6 particles (cm^{-3}) near fire
Coagulation lifetime < 1 hour



Mass increase is from more particles,
not larger particles (same as Mexico City)



Regime where NPF, Coagulation, and Condensation are important (& constrained by obs.).

Plan: When all data become available, run chemical-microphysical models (Rahul Zaveri, lead)
Object: Test mechanisms. Generalize. Predict Impacts.