NCAR

OGI SCHOOL OF SCIENCE & ENGINEERING

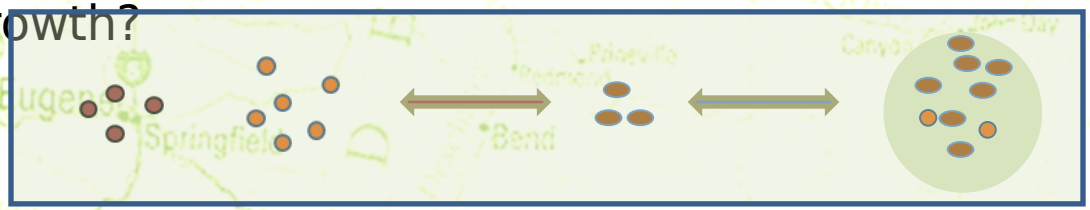
Process-Level Modeling

- What are the most likely rxns?
- To what extent will products contribute to OPM?
- How important for biogenic SOA formation?

New particle formation and growth?

Chamber

- Expanded biosphere/atmosphere exchange facility
- Evidence of accretion rxns
  - Identify compounds or functional groups
  - Study properties



Accretion Reactions

product has *significantly* lower vapor pressure than reactants

Example

Pinonaldehyde + C10 Hydroperoxy = C20 Peroxyhemiacetal

Vapor pressure (atm) at 288K:

PA: 1×10^{-5}

HP: 2×10^{-7}

HA: 2×10^{-13}

Shared Objectives

- Link **process-level** models with field and chamber data
- Better understand **particle growth** at early stages

Etc.

Picture Sources

- University of Texas Map Library
- Intrawest, Steamboat
- Online Climbing Journal

Collaborators

- Jim Pankow (OGI)
- Jim Smith, Christine Wiedinmyer (NCAR)
- Michael Boy (U. Helsinki)
- Tim VanReken (WSU)

Kelley Barsanti, ASP Post Doc, Atmospheric Chemistry Division, NCAR