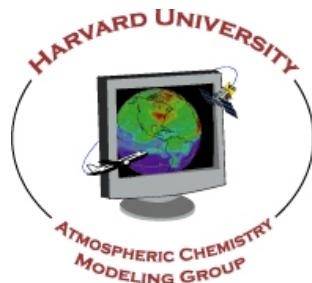


Colette L. Heald
(heald@atmos.berkeley.edu)



up until 2000

2000-2005
PhD
Daniel Jacob

2005-2007
NOAA postdoc
Allen Goldstein
& Inez Fung

Jan 2008
Asst. Professor

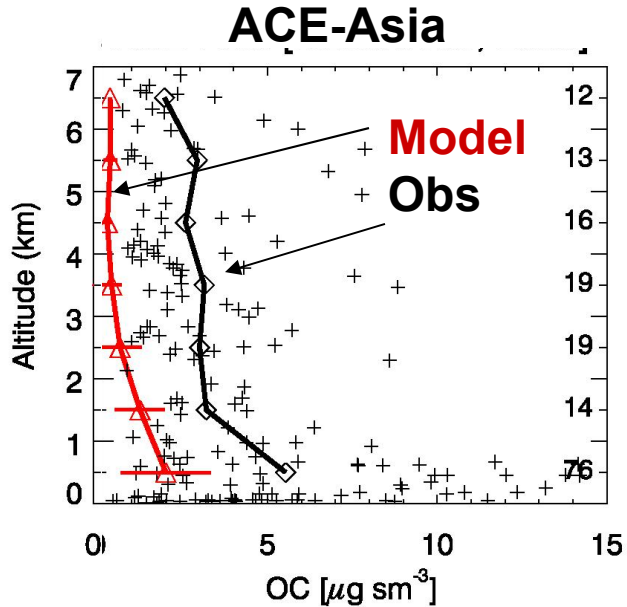
I am a global atmospheric chemistry modeler.

Research Interests:

- Aerosol sources, composition and chemistry
- Biogenic and anthropogenic influences on chemistry and climate
- Intercontinental transport of pollution

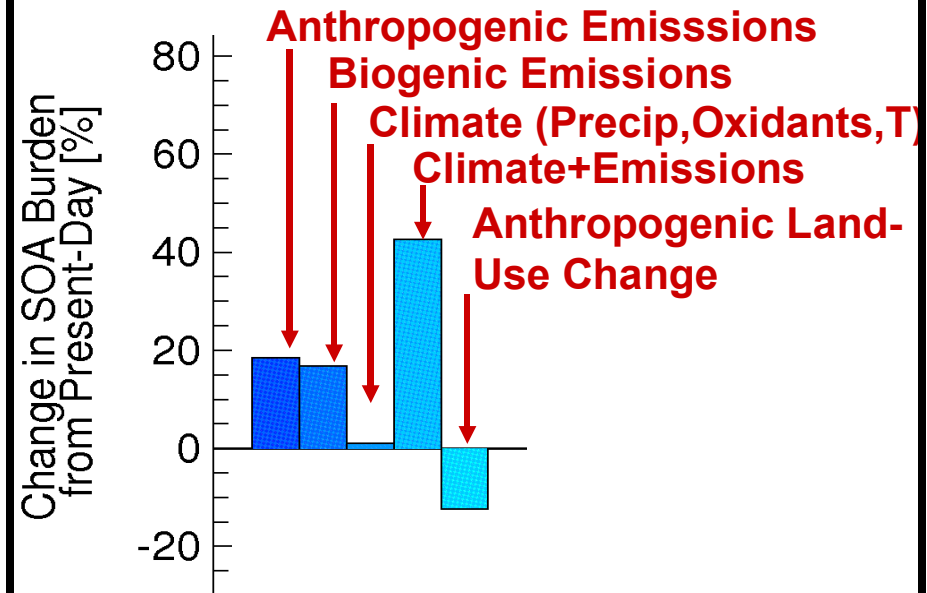
SOA-RELATED RESEARCH

WHAT DO AMBIENT OBSERVATIONS TELL US ABOUT SOA?



Two studies focused on ACE-Asia (off of Japan) and ITCT-2K4 (NE North America) aircraft campaigns demonstrate large gaps in our understanding of SOA (as simulated by models) [Heald et al., 2005; 2006]

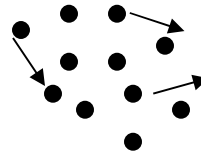
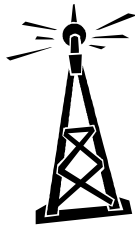
HOW WILL SOA RESPOND TO FUTURE CLIMATE EMISSIONS AND LAND-USE CHANGE?



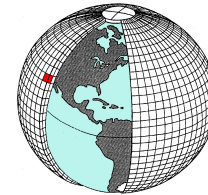
Coupled land-atmosphere model used to examine how SOA responds to future climate and emissions. Project a 43% increase in burden in 2100 (A1B) [Heald et al., submitted]

CONTINUING/ONGOING DIRECTIONS

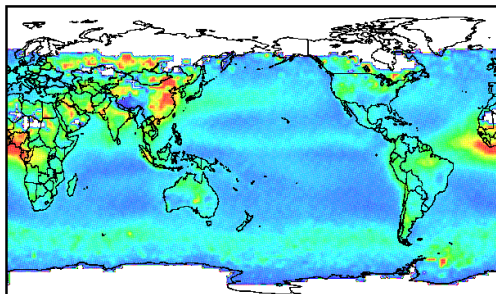
What can the suite of detailed gas/aerosol phase in situ observations tell us about OC sources?



How can we improve global model representations of SOA formation?



DJF MODIS AOD



What can satellite observations of AOD tell us about SOA?



BVOC global emissions response to climate/environment (eg. CO₂) and impacts on chemistry-climate