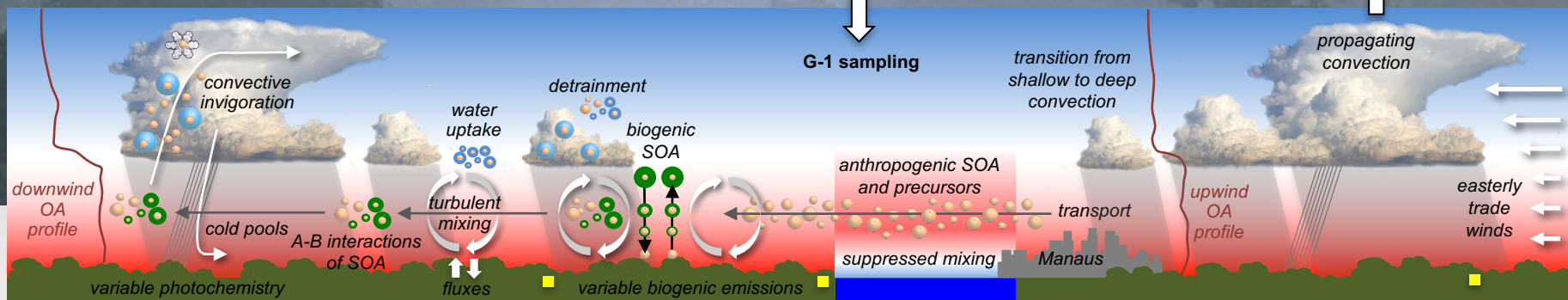
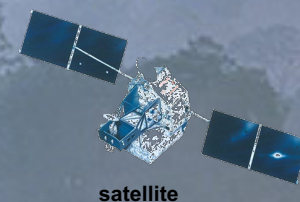
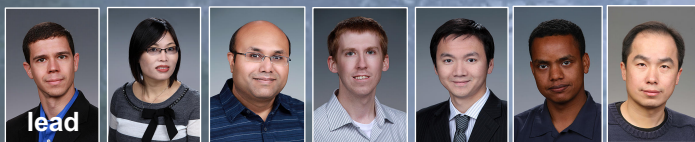




Current and Future GOAmazon Research at PNNL



G-1 sampling

transition from shallow to deep convection

propagating convection

downwind OA profile

cold pools

A-B interactions of SOA

fluxes

detrainment

biogenic SOA

variable biogenic emissions

anthropogenic SOA and precursors

suppressed mixing

transport

Manaus

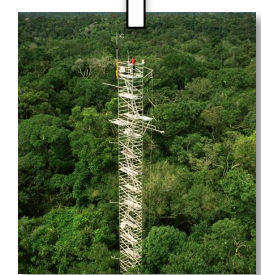
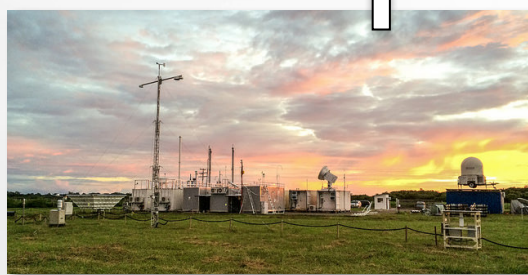
upwind OA profile

easterly trade winds

T3 sampling site

T2 sampling site

T0 sampling sites



GoAmazon Research Strategy: Atmospheric Processes are Interrelated - Requiring a Team Effort

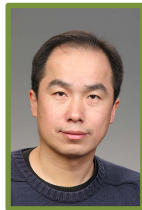


Finding observational and modeling evidence of convective invigoration due to aerosols downwind of Manaus

Modeling the impact of new biogenic SOA treatments and enhancements due to anthropogenic emissions



Quantifying sensitivity of simulated LACI to parameterizations of physical processes



Performing high-resolution simulations to study convective organization and diurnal variability



Providing climatological perspective on propagation and diurnal variability of convection using satellite data



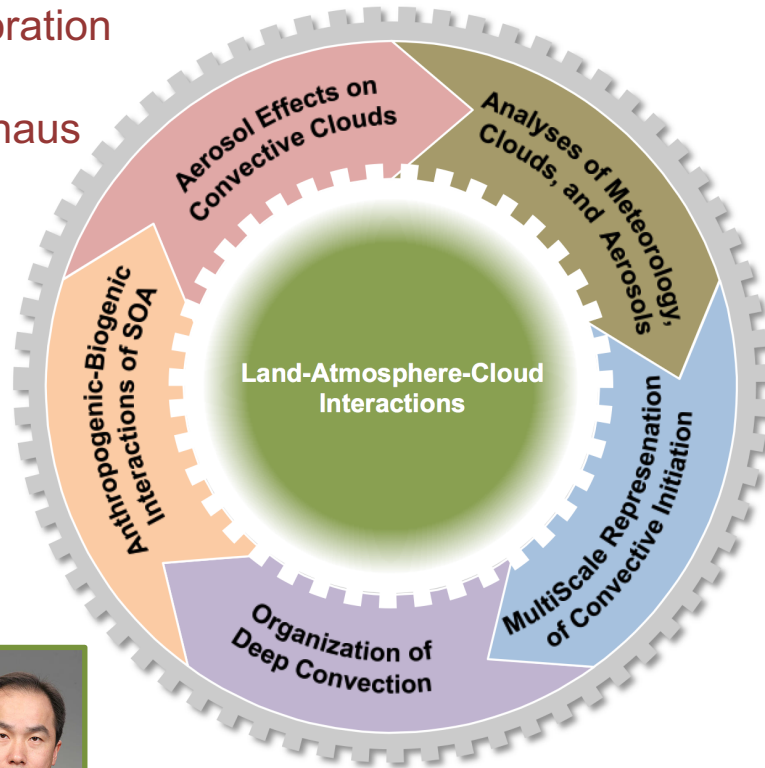
Resolving conundrums in SOA evolution associated with G-1 data



Understanding impacts of cloud radiative effects on shallow-to-deep convection transitions



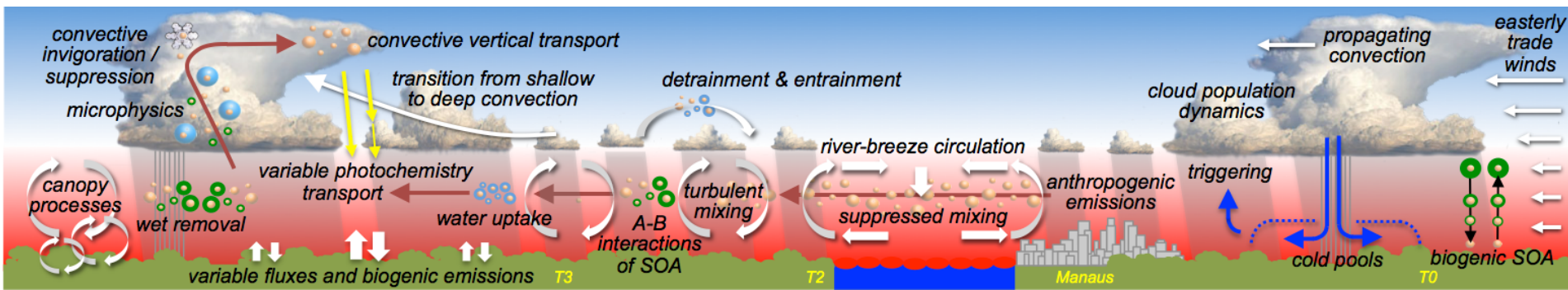
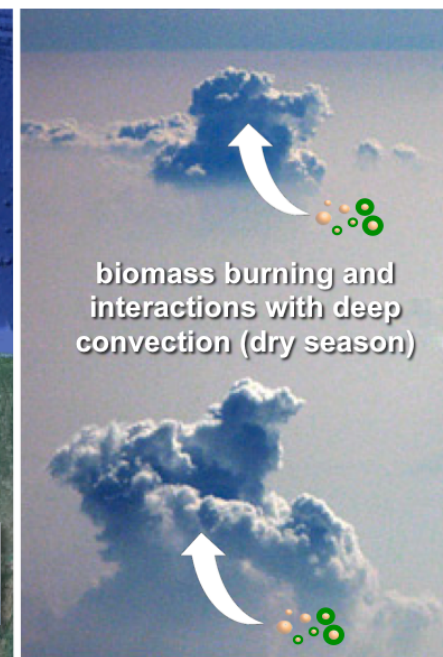
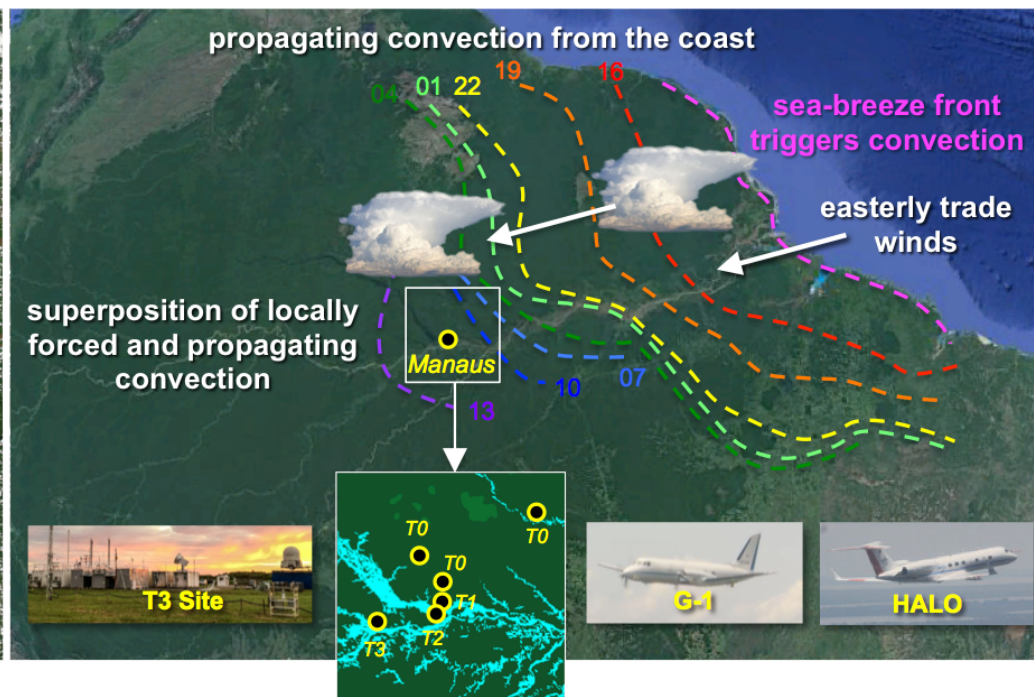
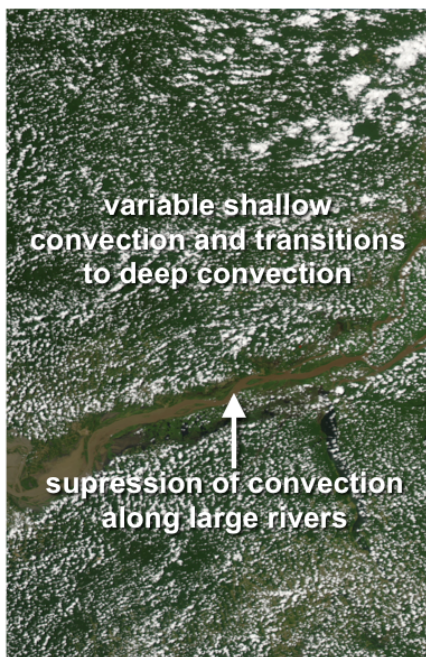
...and collaborating with other GoAmazon scientists



Future Work Will Utilize a GoAmazon Testbed: Measurement Period: Jan. 1, 2014 – Nov. 30, 2015



Within ICLASS: An **objective and systematic methodology to evaluate model performance** associated with new or improved parameterizations we develop in our SFA.



Future Work Will Utilize a GoAmazon Testbed: Motivation and Example of Interactions



The atmospheric processes examined in the different facets of our SFA interact with each other over multiple spatial and temporal scales in complex ways.

