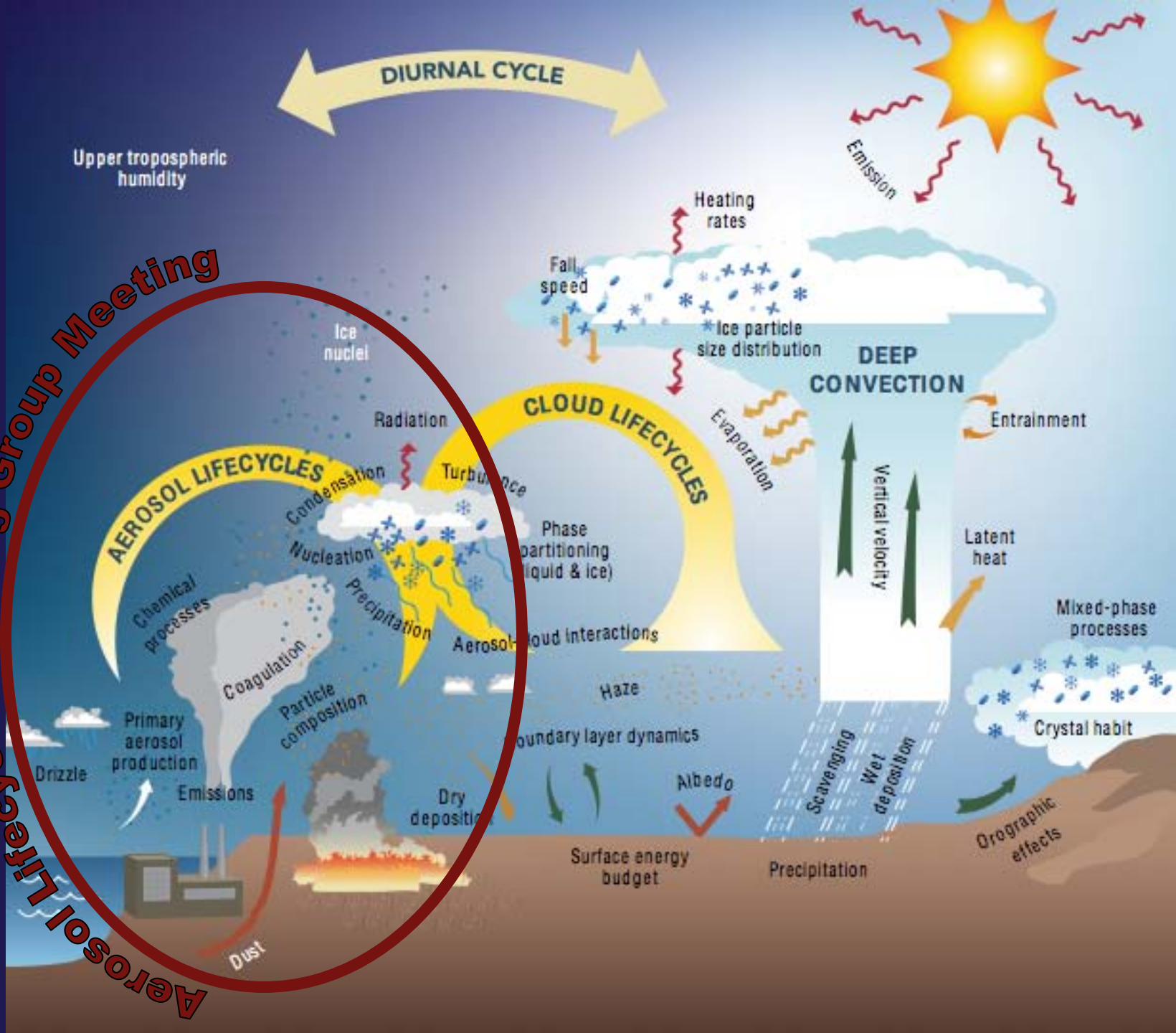
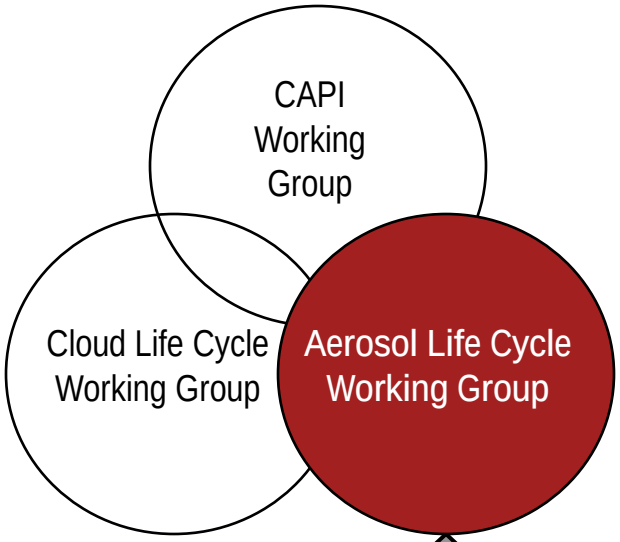
DOE Atmospheric System Research Program
Science Team Meeting 2010

Aerosol Lifecycle Working Group Meeting



ASR / ALWG Structure



DOE Atmospheric Science Program
ASR Program Managers
Kiran Alapaty
Ashley Williamson
ACRF Program Director , Wanda Ferrell
AAF Program Director, Rick Petty

Science and Infrastructure Steering Committee
Bob Ellingson, Chair

ALWG Structure
Co-Chairs
Allison McComiskey, Jian Wang
Steering Committee
Translators ⇒
Rich Ferrare
Larry Kleinman
Paul Ziemann

ALWG Translators
Instrumentation and Data Products
Connor Flynn
Annette Koontz (Support)
Chitra Sivaraman (Support)
Modeling
Jerome Fast

Infrastructure Management Board
Jim Mather, Technical Director
Doug Sisterson, Operations
Randy Peppler, Data Quality
Beat Schmid, AAF Operations
Ray McCord, Data Archive
Richard Eagan, Data Systems
Jimmy Voyles, Field Campaign & Instrument Coordinator

ASR Science Plan

http://www.sc.doe.gov/ober/Atmospheric%20System%20Research%20Science%20Plan.pdf

Science Proposals

FY2011 Call for Proposals
incorporation of ALWG priorities and coordination with field campaign planning and objectives
Pre-applications Due April 12
Formal Proposals Due June 1

"develop innovative laboratory and observational data analyses and to utilize the resulting knowledge from such analyses to improve cloud and aerosol formulations in global climate models…"

Current and Upcoming Campaigns

- CAP-MBL – Clouds, Aerosol, and Precipitation in the Marine Boundary Layer, AMF Deployment Graciosa Island Azores (May 2009 – December 2010)

- CARES – Carbonaceous Aerosols and Radiative Effects (June 2-28 2010)

- StormVEx – The Storm Peak Lab Cloud Property Validation Experiment (Nov 2010-Mar 2011)

- GAVX – Ganges Valley Aerosol Experiment (March 2011-April 2012)

Research Themes

Geographical Distribution of Aerosol

Defining spatial (horizontal and vertical) and temporal variability of aerosol properties and its radiative forcing with reduced uncertainty will provide better observational estimates of aerosol direct and indirect radiative forcing and improvement in modeling these quantities.

Natural vs. Anthropogenic Aerosol

Understanding the contribution of anthropogenic aerosol to the total aerosol is required for determining aerosol radiative forcing. This will require comprehensive understanding of emissions and their sources, life cycle processes, and the resulting aerosol radiative properties.

Scale in Observations and Representation of Aerosol

Understanding the relationship of scale to physical processes to further development of parameterizations that are designed to be less sensitive to scale. (e.g.-ASR has the resources to develop parameterizations at ~1 kilometer).