DC3 Data Meeting
Aerosol Breakout Overview

2/27/2013

Issues to Address

Artifacts during in-cloud measurement

- Some measurements are more susceptible than others (PALMS, SP2, scattering)
- Common inlets present common timing
- Cloud probes (IWC, ice size distribution), when available, could be used for filtering
- Identification of cases to validate datasets and provide justification for publications

****Each group will flag independently****

Potential Papers

New Particle Formation (NPF)/Growth

1. Jim Smith – process study of growth in outflow (MCS case)
2. LARGE – NPF survey, relationship to photochemical/convection clock

Convective Transport

3. Dibb/LARGE/AMS/PALMS – convective transport, assessment of BL variability
4. SP2 – convective transport of BC, comparison to climatology and historic observations
5. DiGangi – effects of inflow aerosol/gases on ice supersaturation in anvil

Outflow/Downwind

6. Froyd - Dust in the UT
7. Minikin (Falcon) – microphysical comparison of aged outflow to background aerosol
8. AMS – Nitrate chemistry from Lightning NOx

Source Characterization

9. Crumeyrolle/AMS - Biomass Burning entrainment (6/22)
10. AMS – comparison of all biomass burning cases, aging

Instrument-Specific

11. Martins – aerosol phase function
12. PALMS – organosulfates
13. Sorooshian – sub-saturated hygroscopicity

** **DIAL provides aerosol typing and vertical/spatial context** **

Scientific Gaps

- Cloud/Aerosol interactions employing wing-mounted probes
- Influence of aerosols on lightning and the production of NOx
- Direct (radiative) effects of aerosols on storm dynamics