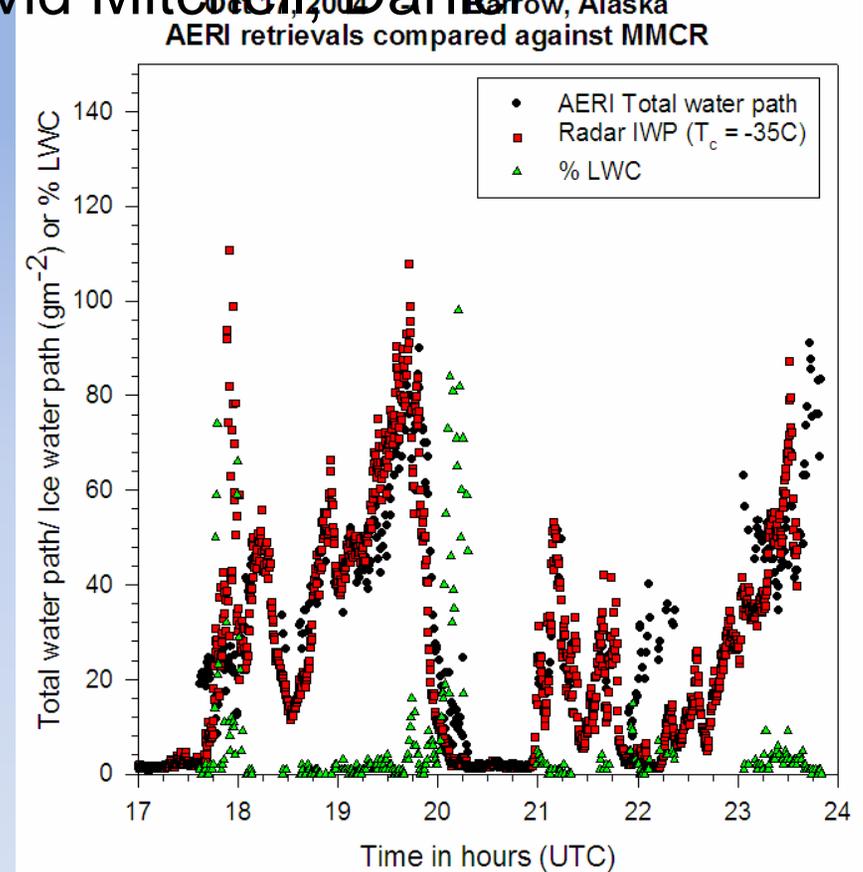
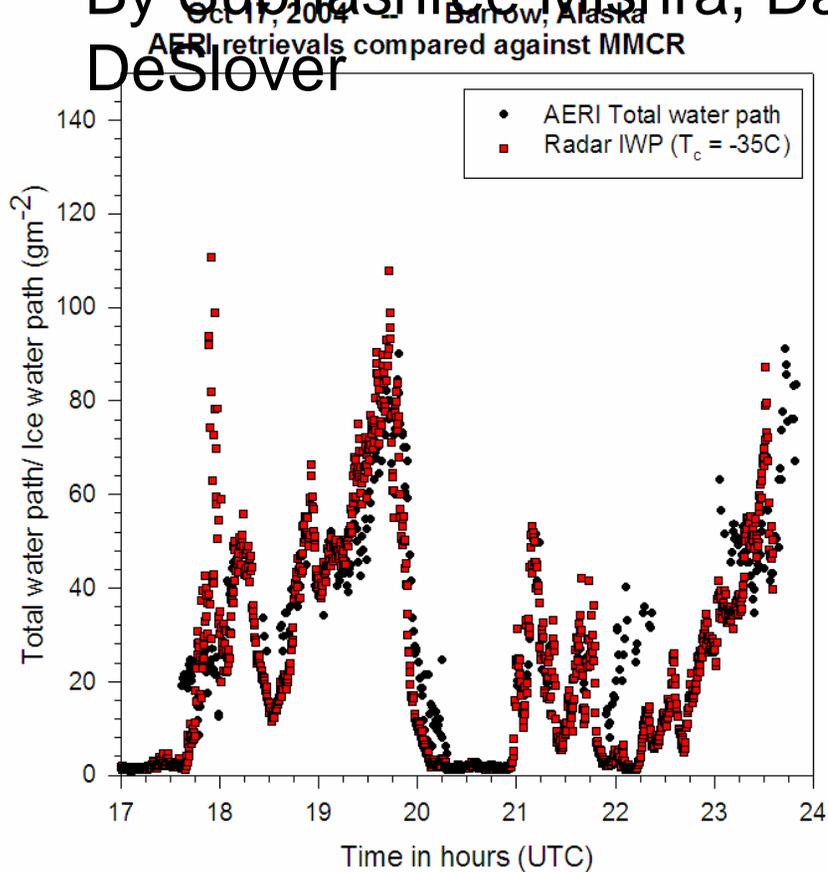


Mixed-phase Break Out Summary

ARM CPWG 2008

Ground-based remote sensing of mixed-phase clouds

By Subhashree Mishra, David Mitchell, Daniel DeSlover

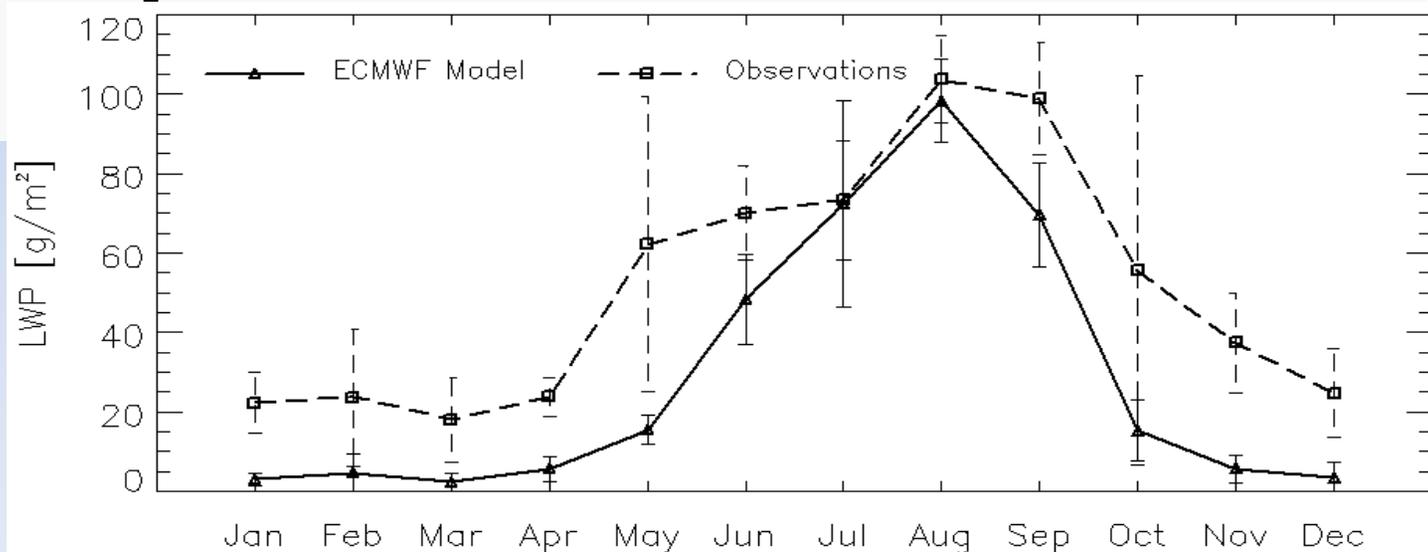
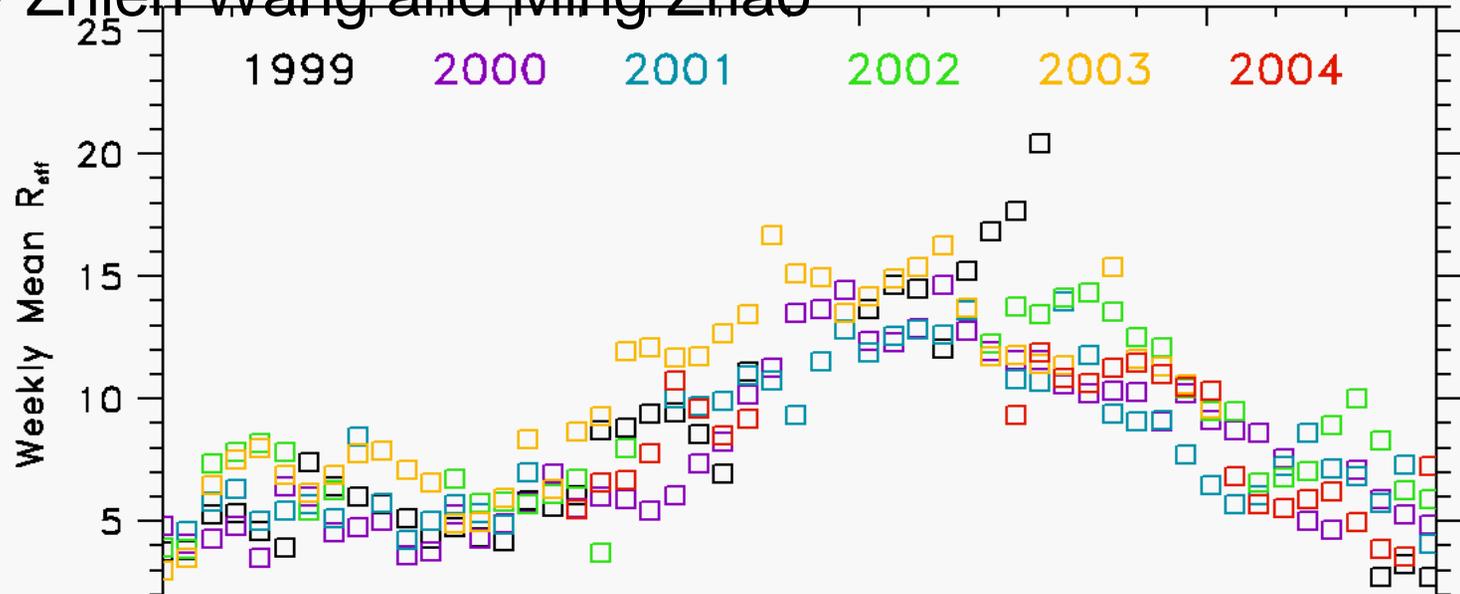


Retrieval results for M-PACE case study from AERI and MMCR

Retrieved cloud droplet and ice crystal number concentrations assuming a total water content (ice + liquid) of 10 mg m^{-3} .

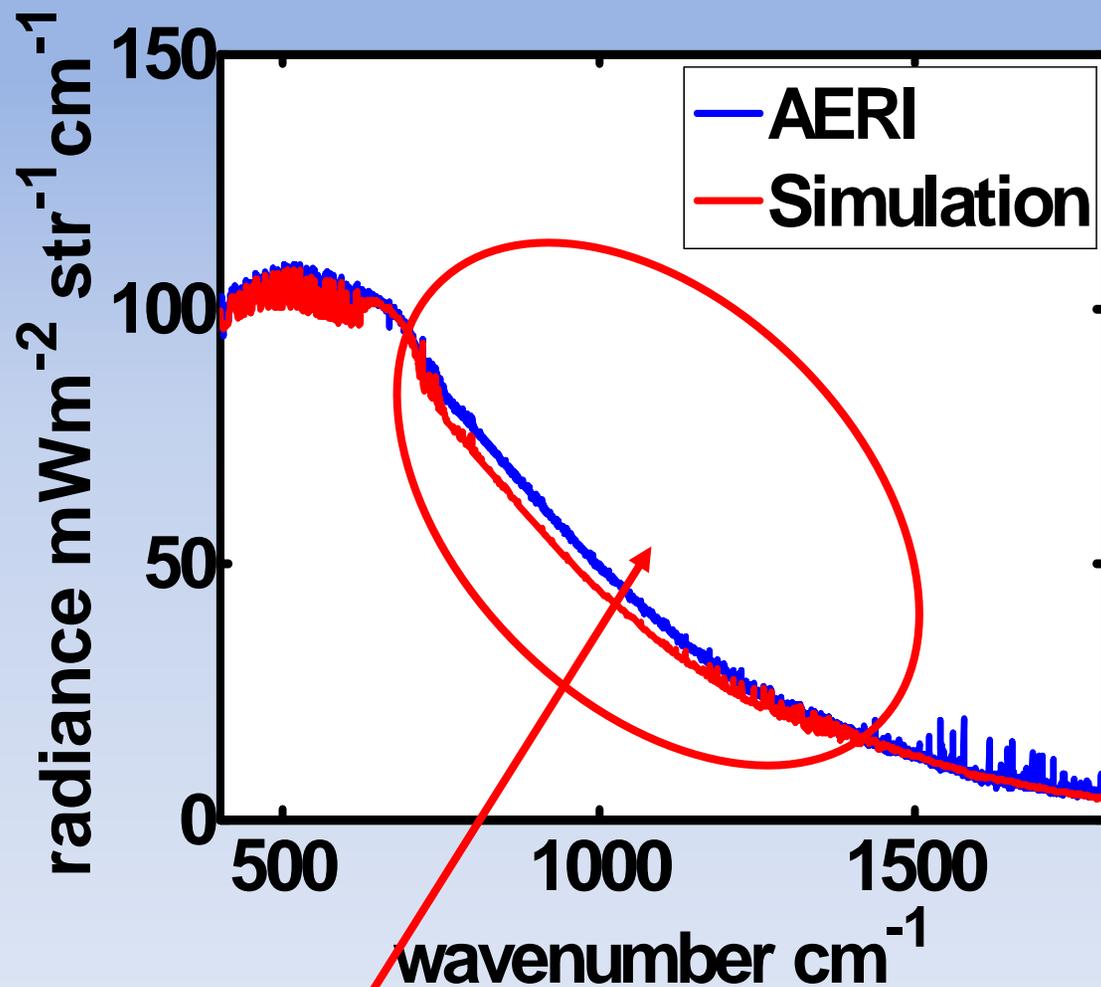
A six-year Arctic mixed-phase cloud microphysical property dataset derived from multiple sensor observations.

By Zhien Wang and Ming Zhao



Cloud properties of Arctic boundary-layer stratus: Impacts on surface radiation

By Greg McFarquhar and Gong Zhang



Difference mainly from 700 to 1200 cm^{-1}

ALTOS –

Arctic Lower Troposphere Observed Structure

- PI: Hans Verlinde
- Oct/Nov 2010
- Tethered balloon at Oliktok Pt., Alaska
- Measurements in lowest 2 km of cloud particles, CCN, met., and radiation
- Desired surface measurements: MMCR, MWR, AERI, MPL?
- Possible coordination with UAV cloud measurements

Recommendations from the mixed-phase group:

- 1) Strong support for the current suggestion of moving instrumentation from Nauru to Oliktok Pt.; both for support of the ALTOS program in 2010 and for longer term operations.
- 2) We support an eventual “routine measurement” aircraft campaign in the Arctic to replace RISCAM which was cancelled. (After RACORO and SPartICus)

Recommendations from the mixed-phase group:

- 3) Recommend NOT purchasing the 90-GHz polarization with the new NSA microwave radiometer. We are not convinced that it will provide useful information.
- 4) Recommend that the first new microwave radiometer be deployed at the NSA
- 5) Recommend that the 90-150 GHz microwave radiometer be deployed at the NSA after RACORO.