

# Entrainment Breakout

## Monday, March 12 7:30 – 9:00 PM

7:30 – 7:45 **Krueger** – Entrainment in Cumulus Ensembles: Cumulus Parameterization versus Giga-LES

7:45 – 8:00 **Lu** – A New Approach for Estimating Entrainment Rate in Cumulus Clouds

8:00 – 8:15 **Albrecht** – Estimating Entrainment Rates in Stratocumulus Clouds using MMCR Observations

8:15 – 9:00 **Jensen** – DISCUSSION: ASR Entrainment Focus Group and White Paper

# From Entrainment FG White paper

(Contributions from Jensen, Krueger, Kollias, Liu, Vogelmann)

## Approaches

- 1) Forward modeling of new (ARRA) remote sensing observations using existing LES results
- 2) Utilize existing long-term ARM measurements to retrieve cloud and environmental parameters relevant to entrainment
- 3) Model (LES/CRM) intercomparison in order to evaluate the robustness of representation of quantities that play important roles, or are impacted by, the entrainment process including the vertical profile of humidity, buoyancy reversal, and CDNC dependencies
- 4) Inter-comparison of GCM convective parameterization schemes
- 5) Propose and carry-out a coincident aircraft and surface-based remote sensing IOP targeting entrainment processes in shallow cumulus clouds