Precip Radar 3D Gridded Reflectivity
(10 Minute Sampling)

• Rain maps
• Convective-stratiform maps
• Echo top and echo base
  – Echo type (e.g., shallow, mid level, and deep convection, stratiform, anvil)
• Reflectivity PDFs by height (or CFADs)
  – Threshold area coverage (e.g., 5, 20, and 40 dBZ)
• Latent heating
Other precip radar products of interest

- 3-D gridded radial velocity
- Area-average divergence (or VADs) [hourly]
- 3-D gridded polarimetric variables
  - Hydrometeor ID
  - Improved rain maps
  - LWC and IWC?
- Humidity retrievals (S- and K_a-band)
Cloud radars

• Vertically pointing
  – Typical ARM suite of products

• Scanning (To be developed)
  – 3D ARSCL
  – 3D spectra
  – 3D radiative heating
Convective-stratiform Reflectivity (convert to rain with Z-R relation)

Deep and shallow Stratiform Anvil convective
TRMM PR reflectivity PDFs with height

Stratiform

Convective

Anvil

Shallow, isolated
VADs

(a) Model-MM5 (13-14Mar07)

(b) Obs-ADRAD (13-14Mar07)

(c) Model-MM5 (14-15Mar07)

(d) Obs-ADRAD (14-15Mar07)