

# How ARM meets the needs of ASR Science Goals

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My perspective:

BNL-ANL SFA Manager, “Influences of Aerosol and Cloud Processes  
on Climate”

ARM/ASR researcher for 22 years

former ARM Translator

PI for the MC3E, TRACER campaigns

Main research interests in:

- 1) deep convective and
- 2) marine boundary layer cloud processes

# What is ARM doing well? What can be improved?

## Strengths:

- Main instrument datastreams (KAZR, Radiosonde, RWP, Disdrometer, MWR) are robust.
- Long-term consistency in these datasets
- Support for SatCorps datasets
- Consideration of diversity of data user groups

## Need improvement

- Thermodynamic profiling at ENA site
- Insects still remain a problem for shallow cumulus for KAZR
- Use of long-term ARM datasets
- For convective studies, need to sample ample convection (TWP, GoAmazon, CACTI, TRACER)

# What are critical measurements?

Depends on the science questions.

Don't forget about the baseline measurements  
(i.e., there is still a lot to learn from the "soda straw")

Measurements of the thermodynamic environment is critical.

# Balance long-term (fixed sites) vs. field campaign (IOP/AMF)

For data processing:

Prioritize baseline VAPS (that are mostly operational).

For complicated (different instrumentation, adaptive scanning), concentration should be on quality-controlled, calibrated (b1 level) data. Higher-level products should be responsibility of researchers.

More sharing of PI products