# Data Stream Report

Friday, November 10th 2005

Cloud Properties Working Group Meeting

Mike Jensen

Long – Local Cloud Field QME

Shupe – New Microbase Product

Luke – Micro-ARSCL and the Insect Mask

Dunn – Proposed upgrades to Microbase

# Proposal: Development of a Local Cloud Field Quality Measurement Experiment (LCF QME)

Chuck Long

PNNL

# Proposal for new VAP

- Local Cloud Field QME
  - combine data/retrievals to produce best estimate of local cloud field macrophysical properties
  - “local” here meaning significantly affecting the hemispheric instruments

  Inputs:
  - TSI (100 Deg FOV, cloud aspect ratio)  [also IRSI]
  - ARSCL (temporal cloud fraction, heights, aspect ratio)
  - IRT (clear/cloud temp)
  - AERI (cloud temp, thin opt depth)
  - MFRSR CLDOD (optical depth and effective radius)
  - CLD VIS (MPL cloud visible optical depth)
  - Flux Analysis (listed variables)

# Proposal for new VAP

- use for MicroBase --> BBHRP P_i
  - Can maintain purity for closure analyses by eliminating Flux Analysis retrievals
  - Can include Flux Analysis for “best product”
  - “$0^{th}$” order: does ARSCL time series represent local cloud field
    - Is 20 minutes of ARSCL appropriate for given situation?
  - Use in conjunction with MicroBase, similar to using MWR and sondes for Merged Sonde
- Fodder for CRM comparisons
- Statistical/climatological analyses

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# Micro-ARSCL VAP and the MMCR Insect Clutter Mask

Edward Luke[1], Pavlos Kollias[1], Karen Johnson[1], Eugene Clothiaux[2]

1. Brookhaven National Laboratory 2. Penn State University

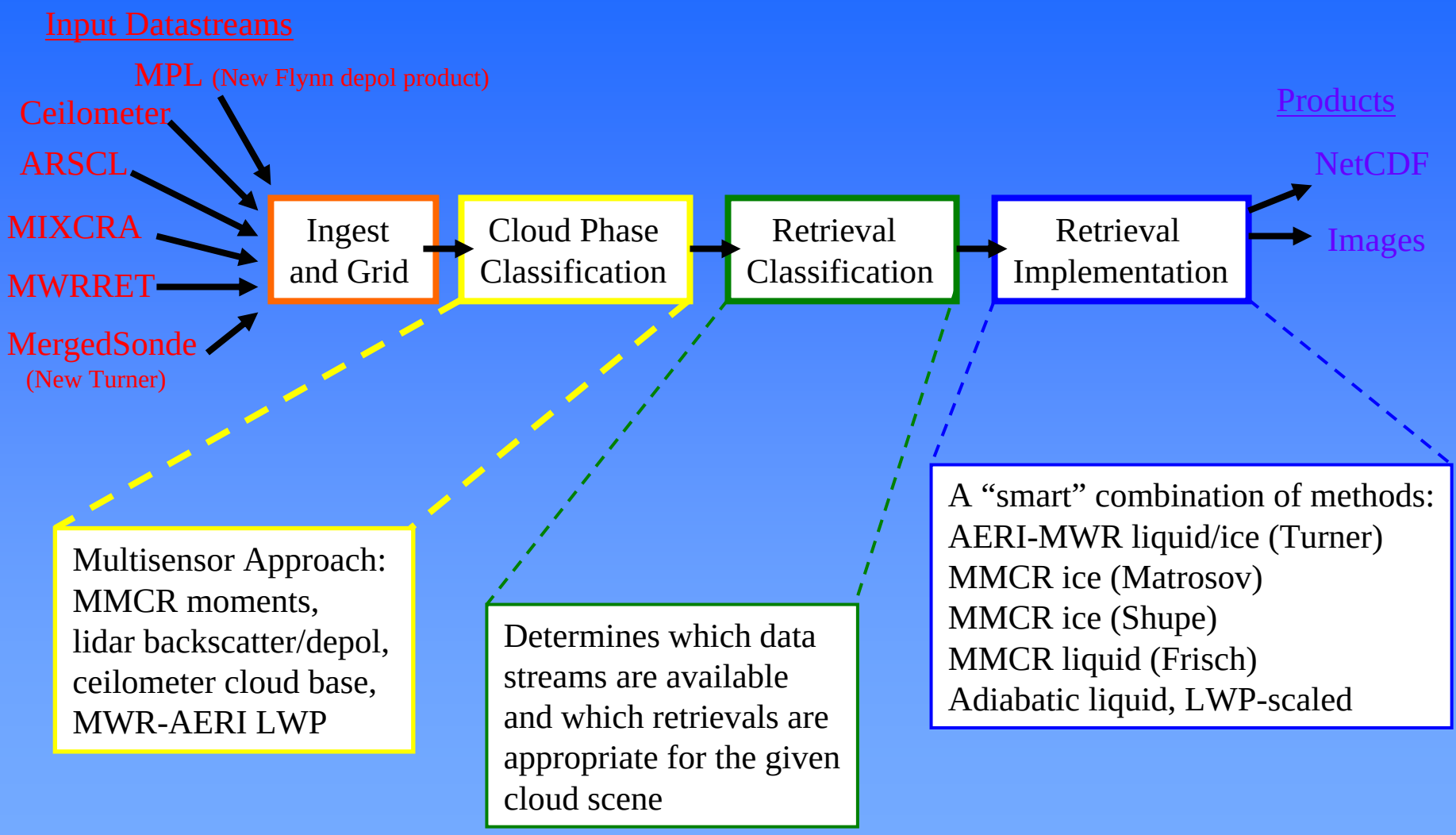
ARM Atmospheric Radiation Measurement

# A New Microbase Product:

Adding phase classification, AERI, and multisensor retrievals

*Matthew Shupe and David Turner*

# *The General Idea*

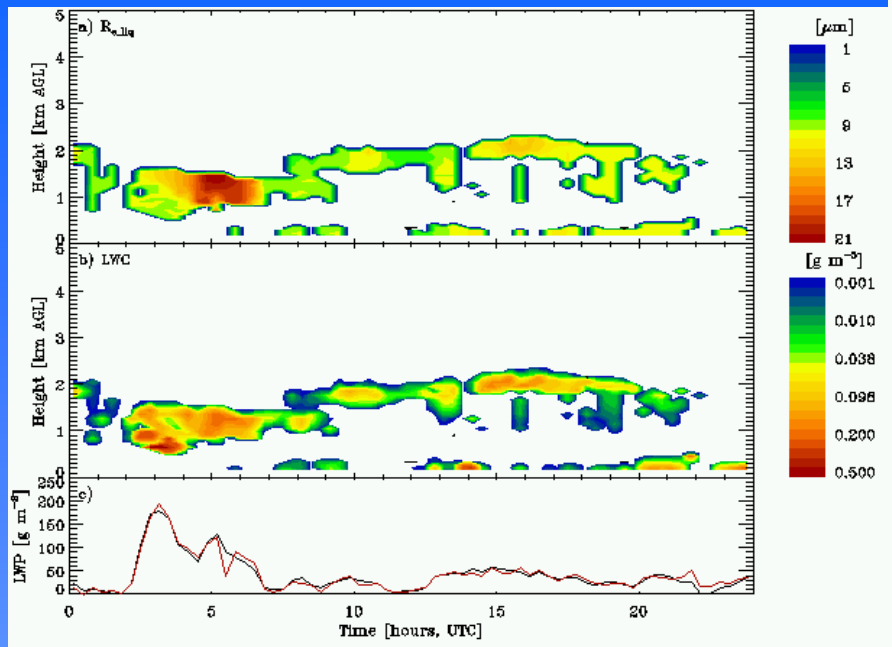


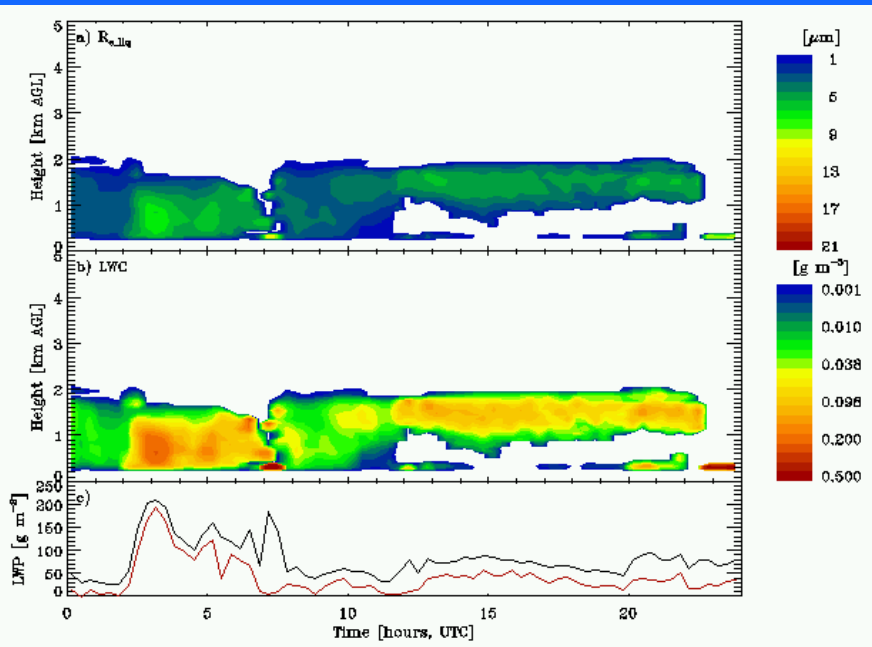
ShupeTurner

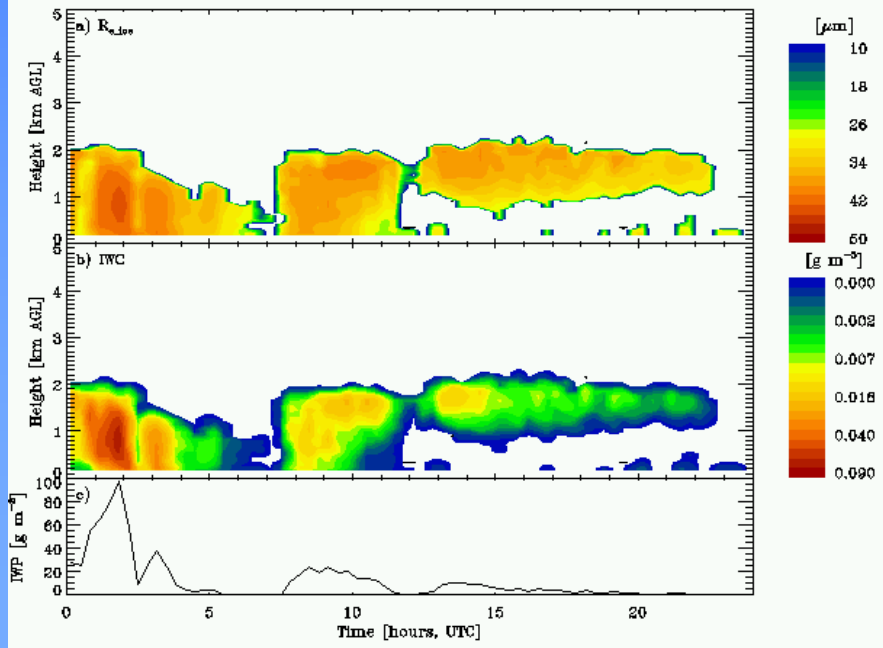
Original

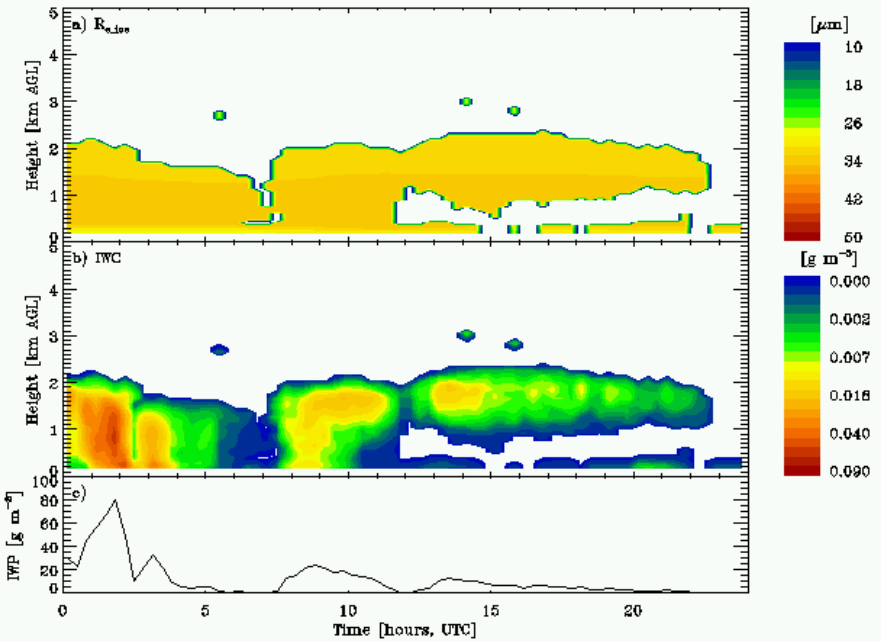
Liquid Properties

Ice Properties



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# Proposed Upgrades to the MICROBASE VAP


***Maureen Dunn  Pavlos Kollias***

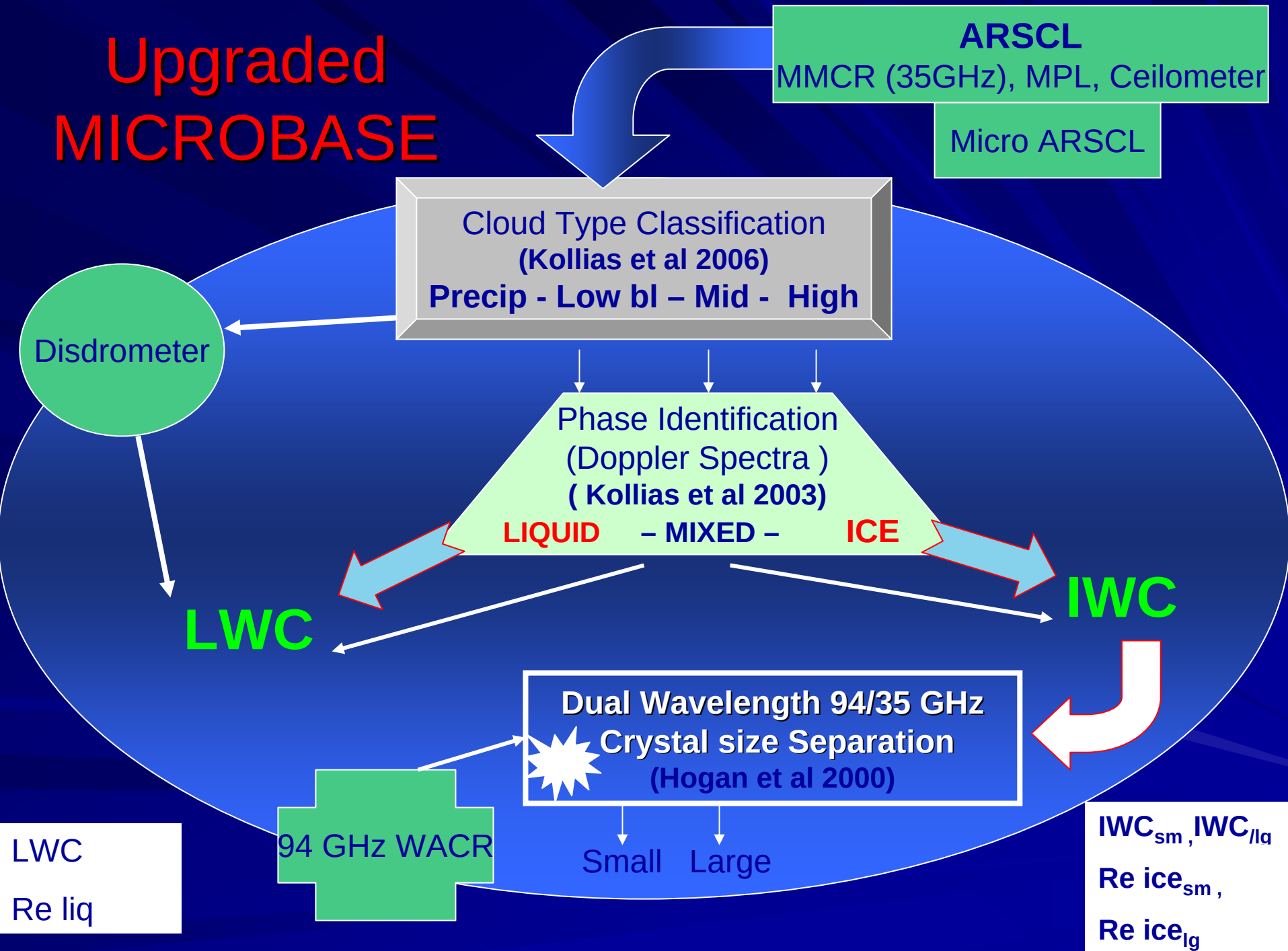
***Mike Jensen  Karen Johnson***

***Mary Jane Bartholomew  Ed Luke***

***David Troyan  Mark Miller***


ARM

# Upgraded MICROBASE



# Working Group recommendations: Prioritization of Translator Tasks

ARM
Atmospheric Radiation Measurement

VAP QA/QC monitoring

VAP production for cases where autonomous operation is either not possible or not cost-effective.

- i.e. ARSCL, MicroBase, MergedSonde

Updating and repairing VAPs, including QC flagging

Updating web pages, technical reports, and documenting data format/content for VAPs currently in production

# Recommendations

- LCF QME – Group did not make recommendations. However, resolving issues related to cloud field macrophysical properties observed by pencil beam vs. hemisphere is important for BBHRP and other applications.

- Shupe/Turner Microbase product – Produce as a PI product for 1 year at NSA and evaluate vs. current microbase within BBHRP framework

- Kollias et al. Cloud Classification – Produce as a PI product

- Radar spectra phase classification is recommended for further development towards producing a VAP