

## Infrastructure Support of QUICR

### • **Making BBHRP a retrieval evaluation framework**

#### **(Riihimaki/Shippert, PNNL)**

- BBHRP has been set up to run by users
- BBHRP can be run with RRTMG – one order of magnitude faster
- Basic BBHRP user guide created
- Working on RIPBE beyond SGP for running BBHRP for all ARM sites

### • **Implementing UQ tools for uncertainty analysis**

#### **(Xie/Tang/Chen, LLNL)**

- PSUDAE has been implemented into MICROBASE for perturbed runs and uncertainty analysis
- Rewriting MICROBASE to make it suitable for parallel runs

## Major community activities

- Had a QUICR session at 2013 AGU Fall meeting
- Had a joint EU-DOE meeting on cloud retrievals in May 2013, Germany
- Will present an invited talk at the AOGS 2014 meeting

## Identified Key Issues

- Need fully defined prior data sets and well understood forward model errors
- Need to develop a common guideline for instrument calibration
- Need measurement simulators so as to provide uncertainties when comparing to measurements due to unknown physical parameters and forward model error
- Need to develop an in-situ case library with improved data quality

## Proposing a major field campaign

Pursue a targeted and comprehensive airborne campaign to build a comprehensive library of mass- and area-dimensional relationships of atmospheric ice crystals and any other properties that are important and normally assumed in retrievals

## Collaborating with European

What do we want to do with the follow-up action items after the DOE-EU cloud retrieval workshop?