ICEPRO: Ice Properties and Processes

Purpose: To better characterize ice physical properties and their uncertainties to improve models across all scales and remote sensing algorithms.

Objectives (planned activities):
1) Derive from in situ observations representations of ice particle and PSD properties and their uncertainties.

2) Utilize ground-based remote sensing instruments to develop retrieval techniques to infer ice particle shapes.

3) Conduct spectral radiative closure studies to provide constraints on ice particle physical and optical properties.

4) Determine the sensitivity of model outputs to representation of ice physical properties. Improve models.
5) Strong synergy with QUICR (improving remote sensing)

New objectives/planned action from breakout session:

6) Determine the controlling factors for m-D/A-D relations and/or particle shape (Jerry Harrington)

7) Conduct studies of ice processes using remote sensing (Alain Protat)

Suggestion: Improve estimation of asymmetry parameter $g$ by developing ice particle aspect ratio relationships for ice particles common to cirrus clouds using in situ data.