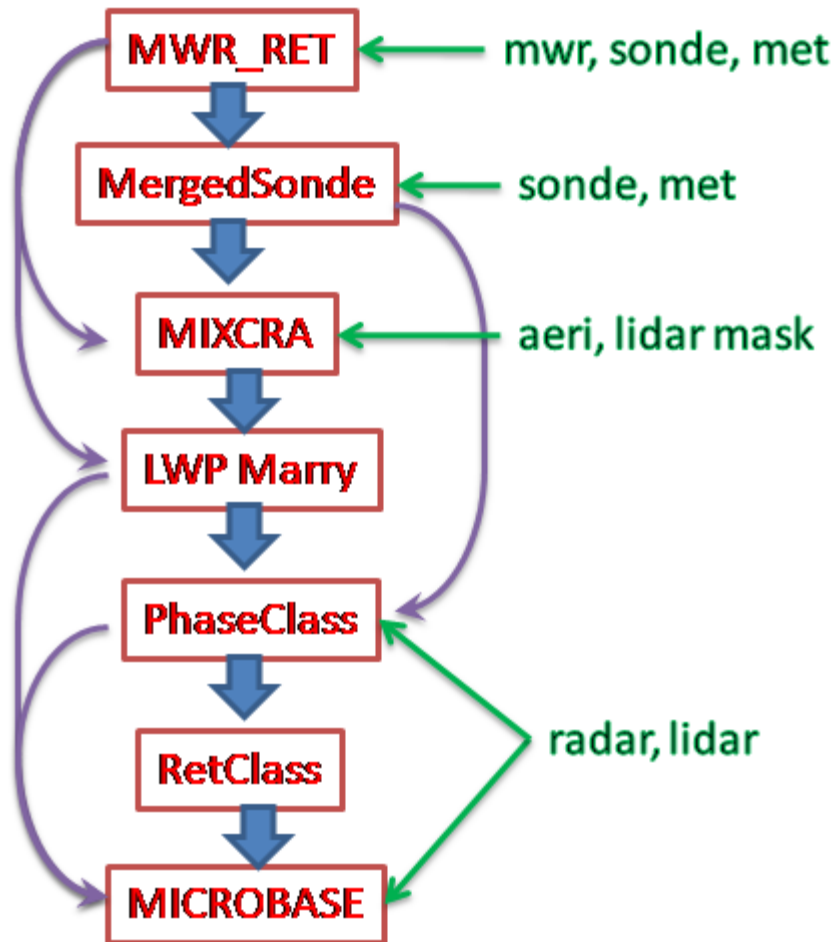


The ShupeTurner Microphysics Product at NSA

Radiative Closure and Comparisons with MICROBASE



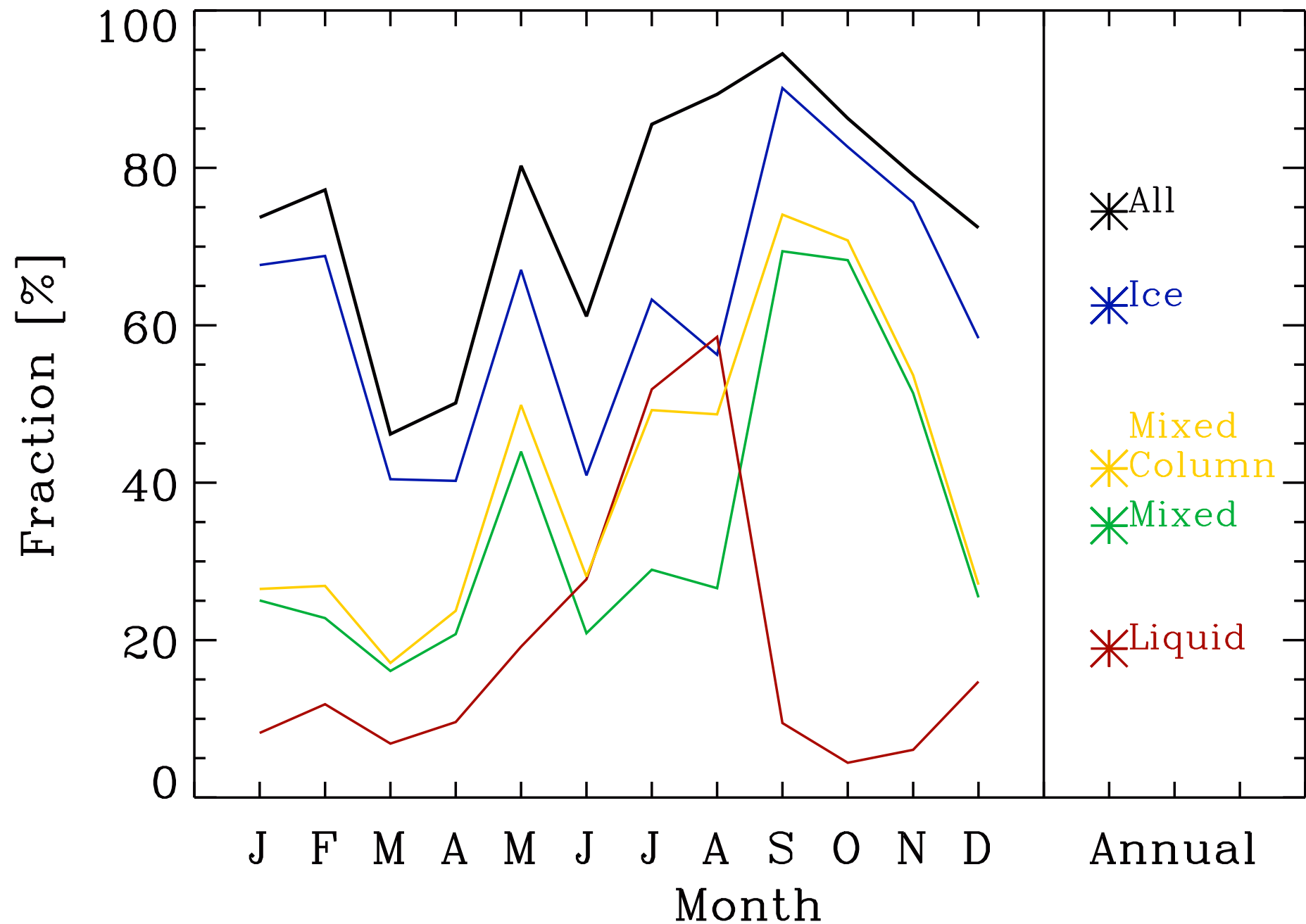
Data Set Details

- 3/2004 – 2/2005 (more in future)
- 1-min or 20-min
- IWC, Rei, LWC, Rel, Ac, phase

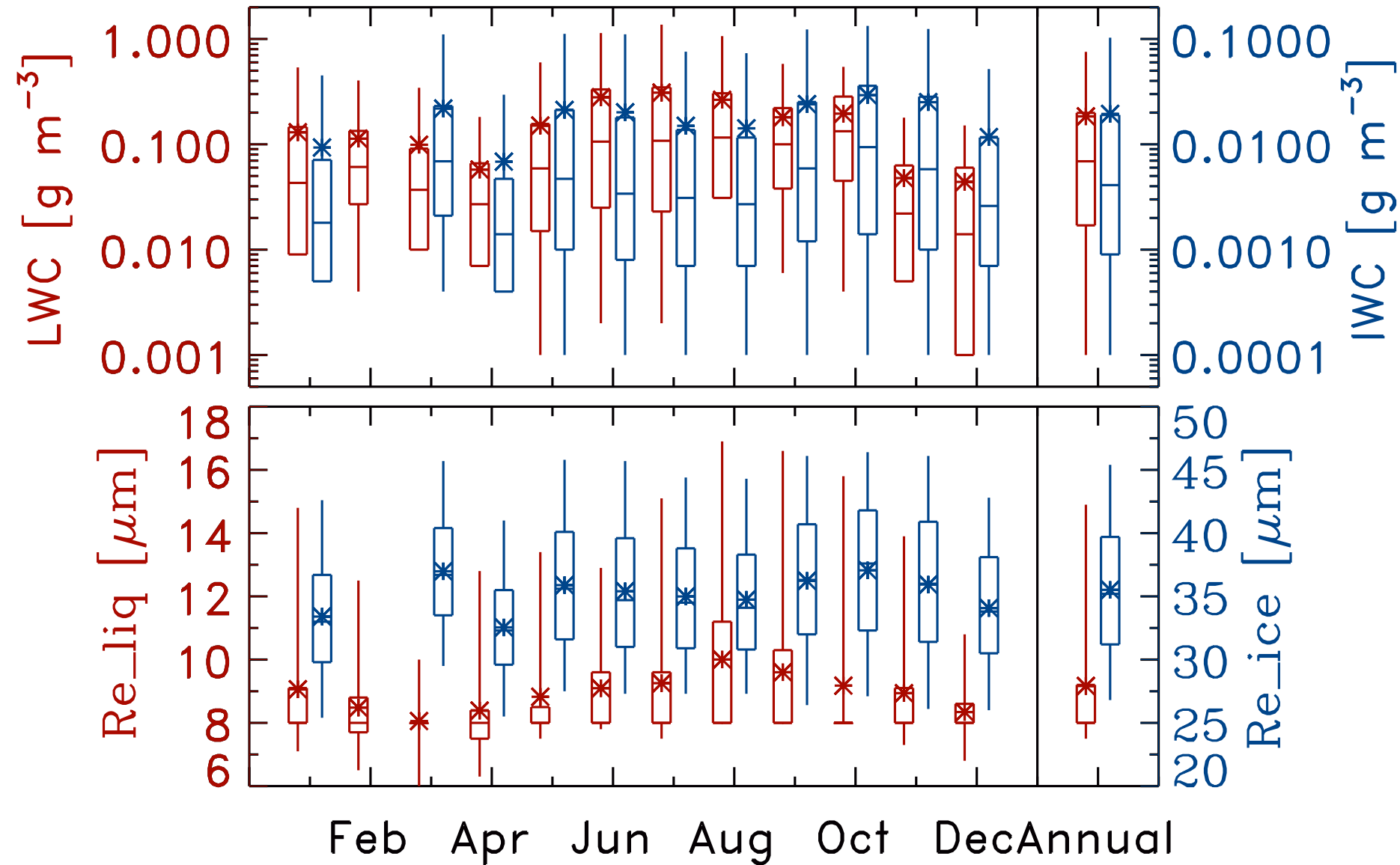
Key Improvements

- 1)Cloud classification based on measurements
- 2)Improved LWP retrieval
- 3)More conditional retrievals

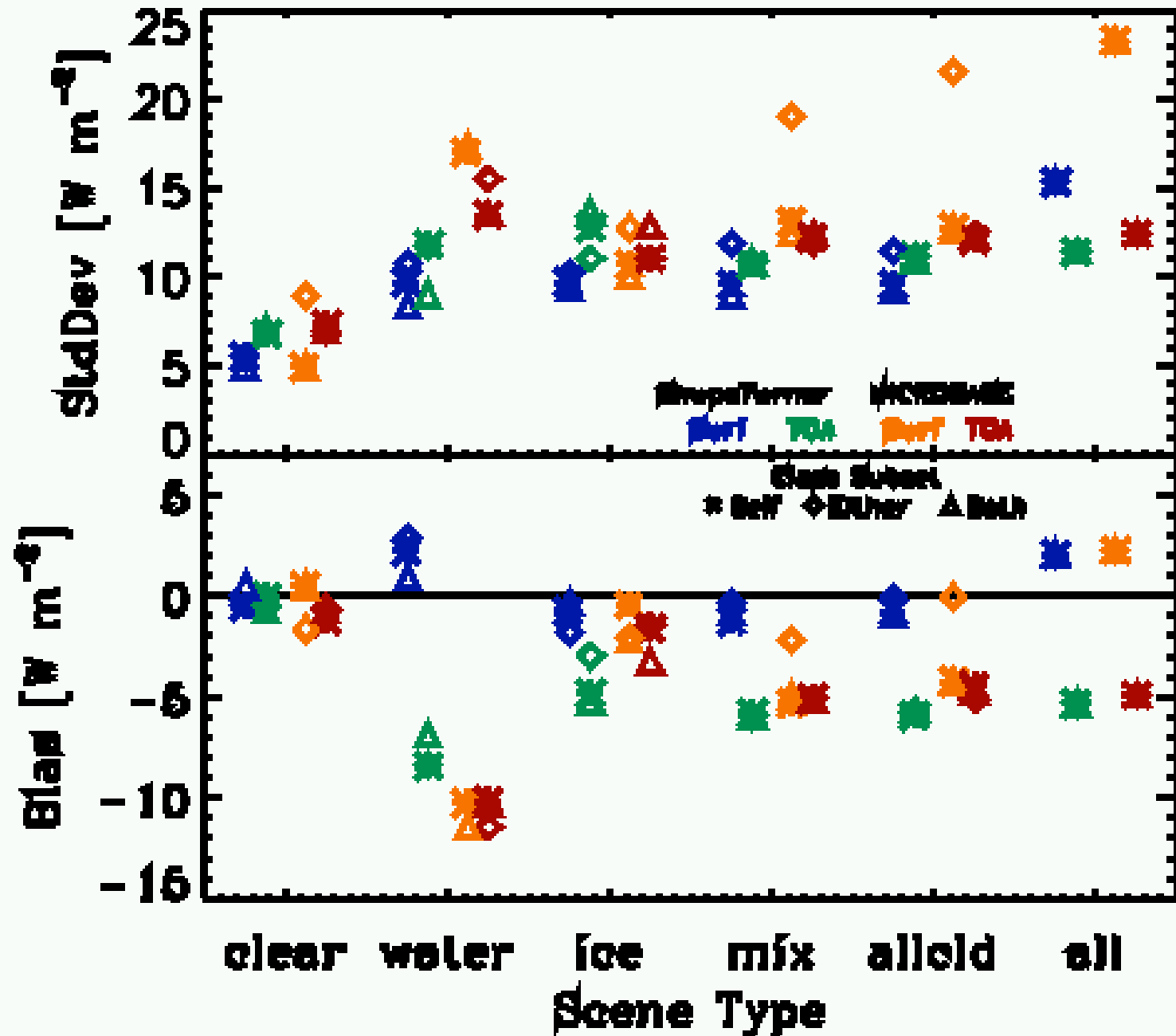
NSA Cloud Classification, 2004–2005

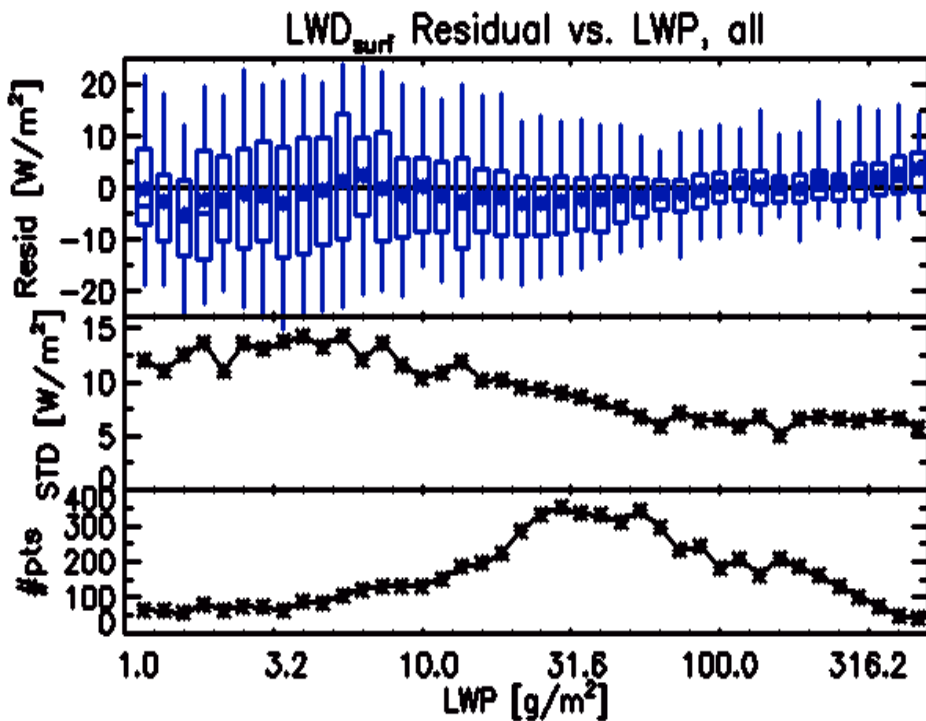


ShupeTurner NSA Microphysics 2004–2005

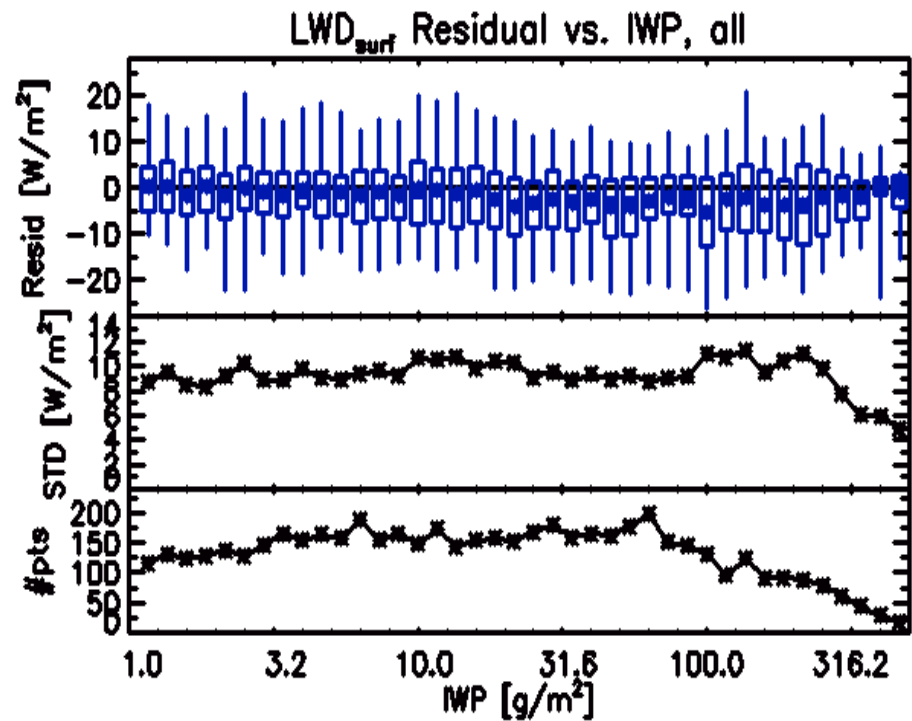


LW Flux Closure



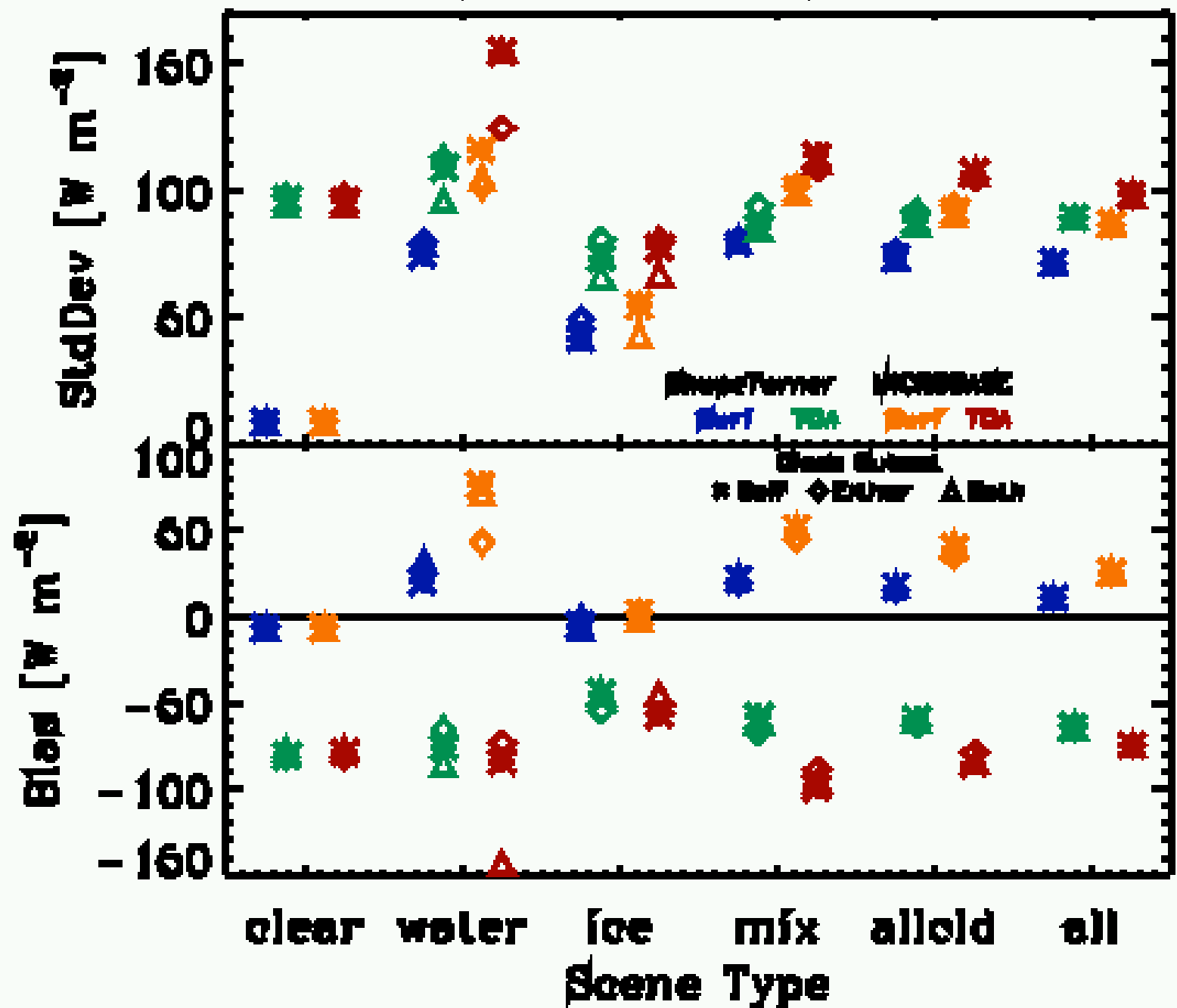


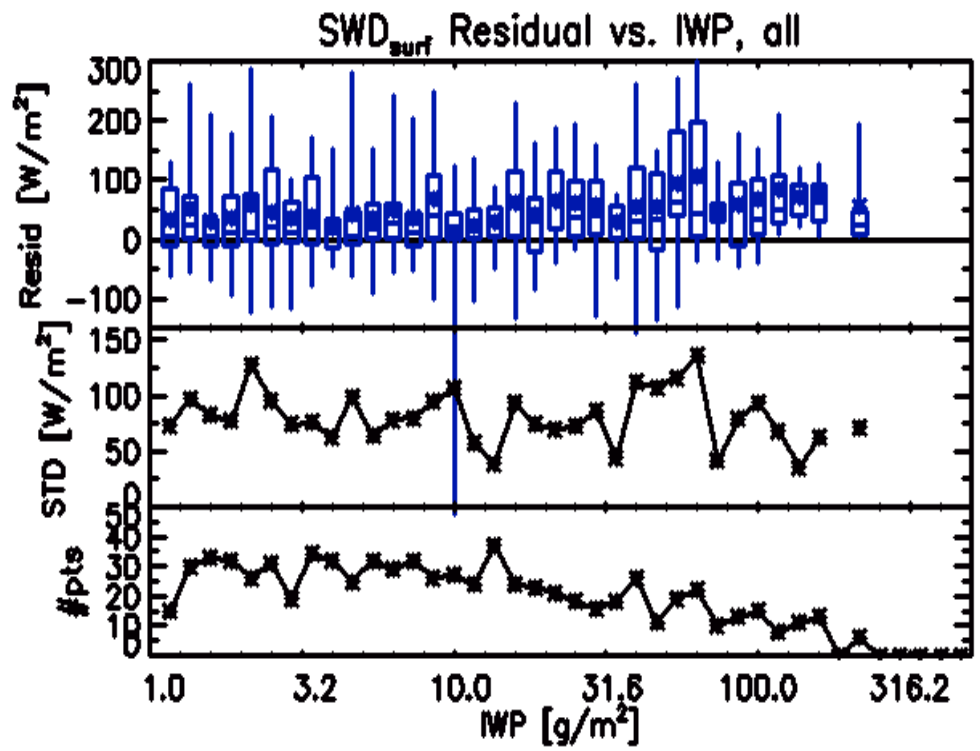
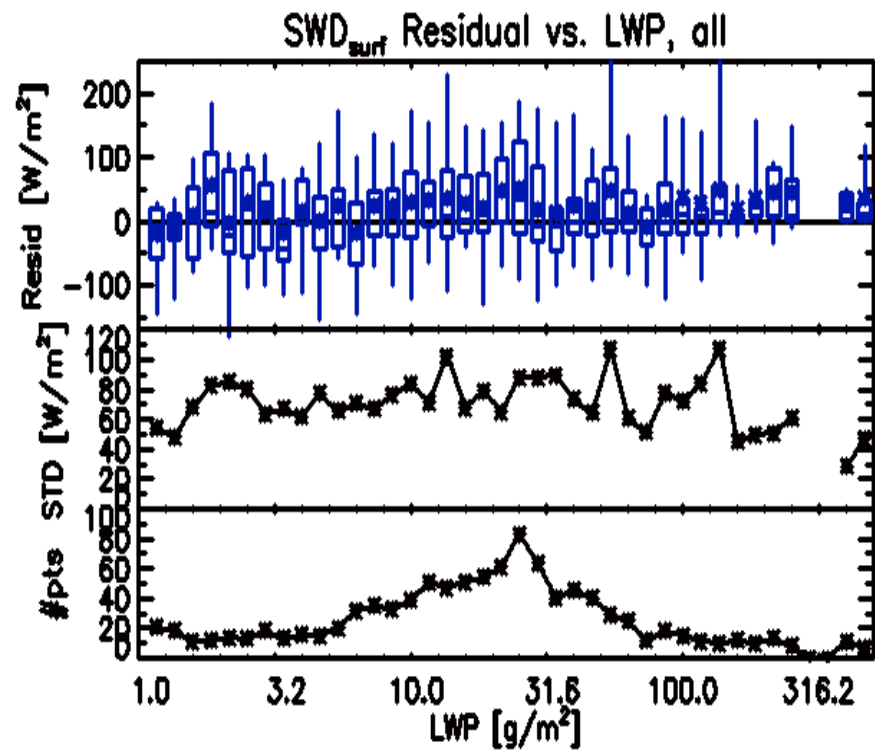
Largest standard deviation and bias are for small LWP.....
and mostly in mixed-phase cloud cases.



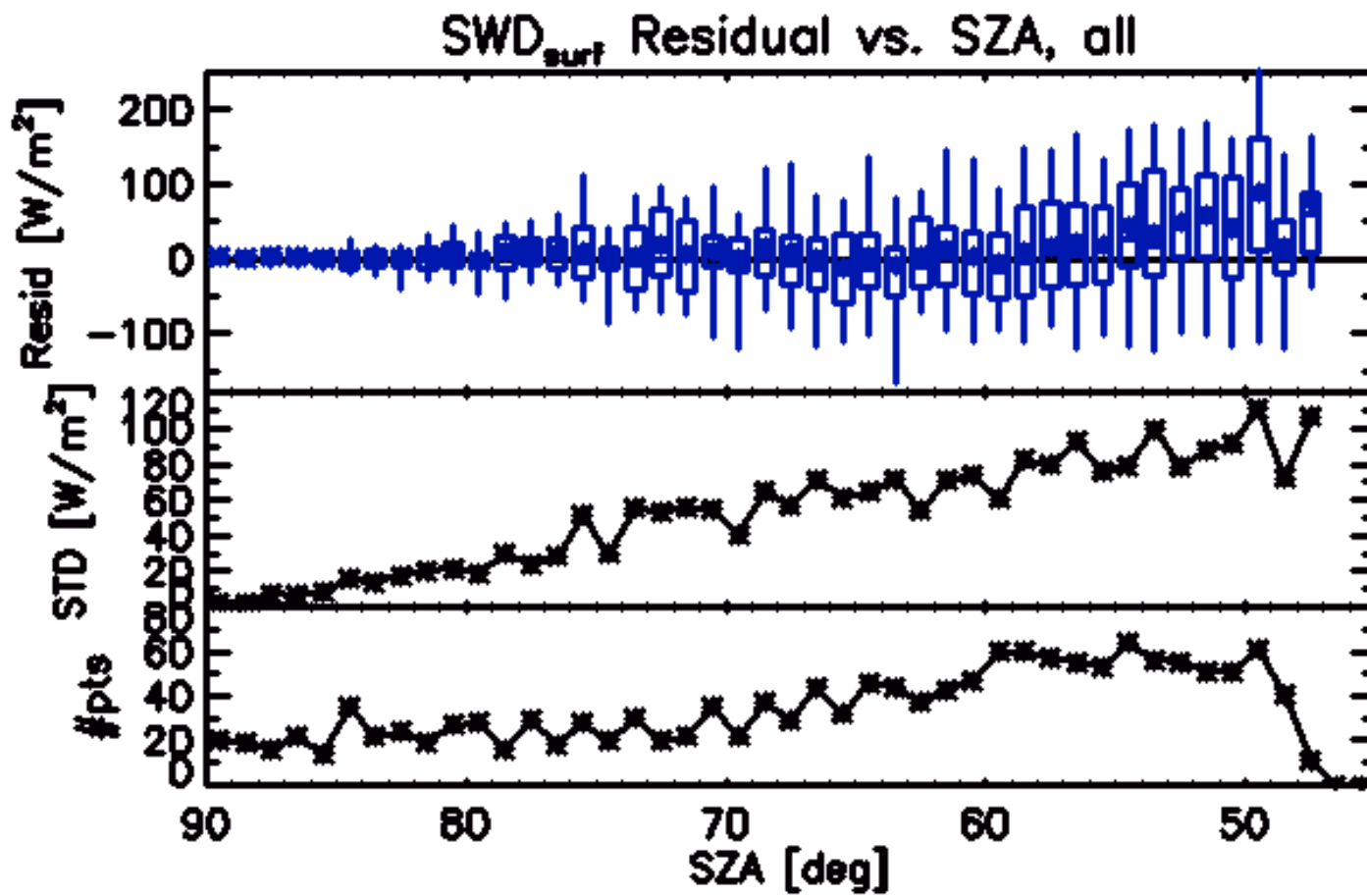
LW surface radiative closure appears to be insensitive to the IWP for IWP < 200 g/m².

SW Flux Closure





SW surface radiative closure appears to be independent of cloud microphysics.....



...but it does depend on sun angle.