



### Summary

**Cloud Fraction**  
 • MERRA CF are in good agreement for total and high layers. NARR has a negative bias for all layers. One difference is for unrealistically high CFs for MERRA during the summer months of July-August. This could be due to optically thin cirrus.

**Radiation Fluxes**  
 • Overall, MERRA has better agreement than NARR for radiative fluxes at ARM SGP

**Precipitation**  
 • NARR has excellent daily and monthly agreement for precipitation with ARM observations. While MERRA captures the monthly variability, it has a significant negative bias for many of the rainy months.

**Atmospheric State**  
 • Significant differences exist for the omega field between reanalysis and ARM. This could have significant impact on modeling studies that are driven by forcing from these datasets.  
 • NARR and ARM RH patterns are similar. Merra has positive bias in the upper troposphere during early summer. This may be related to the high CFs documented during this time period.

