

Cloud effects on aerosol: Synthesis

- Clouds exert major influences on the physical, chemical and optical properties of aerosols and are a major sink for aerosols. The presence of clouds complicates remote sensing of aerosols.
- Unique opportunities for ASR
- Presentations focused upon:
 - Dust aerosol scattering over the Atlantic increases in the vicinity of clouds but only if dust is $< 2\text{km}$
 - New ASR project to generate light absorbing aerosols via pyrolysis and combustion and examine properties at high RH (sub and supersaturated)
 - CAM model study showing improvements in low level Arctic BC through changes in aerosol scavenging
 - Insights into aerosol hygroscopic growth in the vicinity of low clouds using MODIS observations and a simple RH pdf approach to connect cloud cover with clear-sky RH between clouds