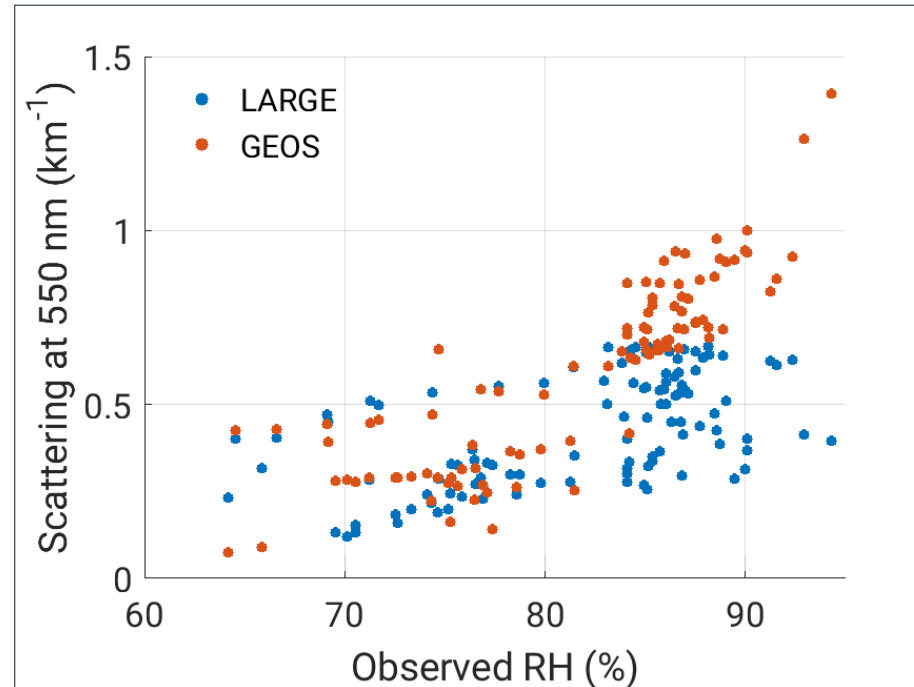
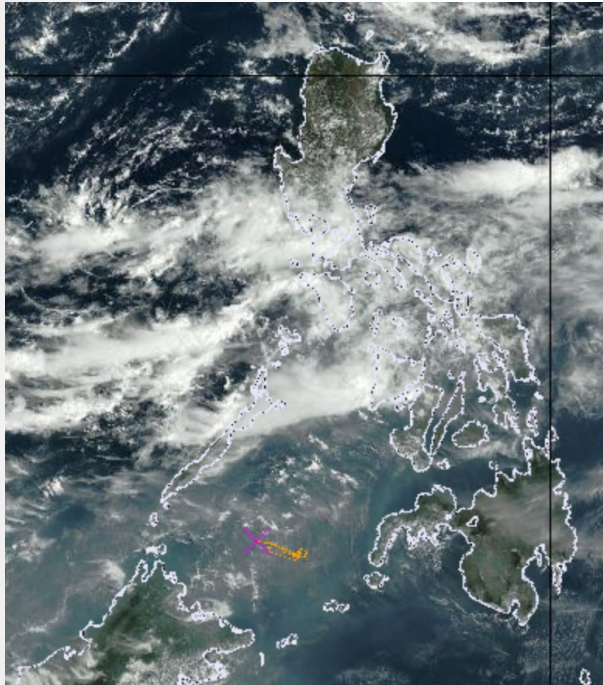


Using Observations from NASA's CAMP2Ex Campaign to Evaluate Smoke Optical Properties in GEOS



Left: NASA worldview "True Color" imagery over the Philippines region. The purple "X" depicts the aircraft location within the smoke plume at the time of observation. The orange line indicates the flight path. **Right:** Aerosol scattering at 550 nm from LARGE aircraft observations and the GEOS model as a function of relative humidity.

Observations collected throughout the CAMP2Ex campaign provide a valuable resource for evaluating aerosols in models such as GEOS, assessing aerosol scattering at 550 nm during a transect through smoke plumes. Hydrophilic aerosols, such as those found in smoke increase in size, and therefore scattering, as humidity increases. GEOS performs well when the humidity is below 80% however there is an overestimation with respect to observations at higher values of relative humidity. Uncertainty exists in the observations due to the methodology for deriving ambient scattering, especially at high values of relative humidity. This advocates for the development of new techniques in observing the relationship between humidity and scattering from aerosols to improve model representation.