**The upcoming NASA PACE mission**

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NASA’s PACE (Pre-Aerosol Clouds and ocean Ecosystem) mission will study Earth’s aquatic ecology and chemistry, and address the uncertainty in our understanding of clouds and small airborne particles called aerosols which are essential for the understanding earth’s energy budget, which controls climate. Measurements made by a radiometer instrument on this mission will allow continuation of the high quality observations on ocean ecology, biogeochemical cycling, and ocean productivity begun by NASA in the late 1980s with the Coastal Zone Color Scanner which was followed by SeaWiFS and MODIS. A polarimeter instrument will improve upon current capability to measure aerosol and cloud properties, aid in atmospheric correction for the ocean color and likely offer new information for ocean retrievals. PACE measurements are likely to have value for terrestrial ecology. Thus, PACE is a comprehensive climate mission that addresses the heart of the climate problem: ocean productivity, global carbon cycle, and the largest uncertainties in our understanding of climate change: aerosols and clouds.

In 2014 a PACE science team (ST) focused on atmospheric correction and inversion of inherent optical properties was competed and selected. Since its inaugural meeting in January 2015, the PACE-ST has begun a series of studies to take advantage of the novel information we expect PACE to gather, including hyperspectral radiometry and a broad spectral range from the Ultraviolet (UV) to the Short Wave Infrared (SWIR). In this presentation we will summarize PACE objectives and likely application as well as the ST objectives and current work.