Friday, October 12
Oral Session 11
11:30–12:30

12:10–12:30

SPACEBORNE OCEAN COLOR REMOTE SENSING IN THE UV-A PART OF THE SPECTRUM

Including hyperspectral UV-A radiance in observations by the OCI and polarimeter instruments onboard the NASA/PACE mission offers new opportunities for atmospheric correction and ocean color product retrievals that were not possible with heritage ocean color sensors. But studying these new opportunities by means of RT computations for UV-A radiance comes also with the need to more carefully consider (i) enhanced scattering in atmosphere and ocean of UV-A radiance; and (ii) changes in UV-A atmosphere and ocean scattering properties. In this talk, we first evaluate regime changes in light scattering contributions to TOA observations over oceans changes when comparing VIS to UV-A radiance. We then discuss implications for atmospheric correction and ocean color retrievals. A particularly challenging case is constraining variations in the amount and height of brown carbon aerosols in the atmosphere when there are simultaneous changes occurring in CDOM concentrations in the ocean. Both these substances exhibit similar absorption spectra in the UV-A which confounds the separation of their impact on spaceborne radiance. We examine the use of multiangle polarimetric remote sensing data to facilitate such separations.

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