

APOLO 2024 Japan

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Detection and retrievals of dust and above-cloud smoke aerosols using PACE observations: preliminary case studies

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The launch of the Plankton, Aerosol, Cloud, ocean Ecosystem (PACE) satellite mission has provided an unprecedented opportunity for better retrieving aerosol and cloud properties using the combination hyper-spectral radiometric and multi-angular polarimetric observations. In this paper, we will demonstrate a few case studies of how to use the combined PACE OCI (Ocean Color Instrument) and HARP-2 (Hyper-Angular Rainbow Polarimeter #2) observations to detect non-spherical dust particles and above-cloud smoke aerosols. We will also demonstrate a method to derive the direct radiative effect of above-cloud smoke aerosols from the OCI observations.