



Supplement of

Retrieving UV–Vis spectral single-scattering albedo of absorbing aerosols above clouds from synergy of ORACLES airborne and A-train sensors

Hiren T. Jethva et al.

Correspondence to: Hiren T. Jethva (hiren.t.jethva@nasa.gov)

The copyright of individual parts of the supplement might differ from the article licence.

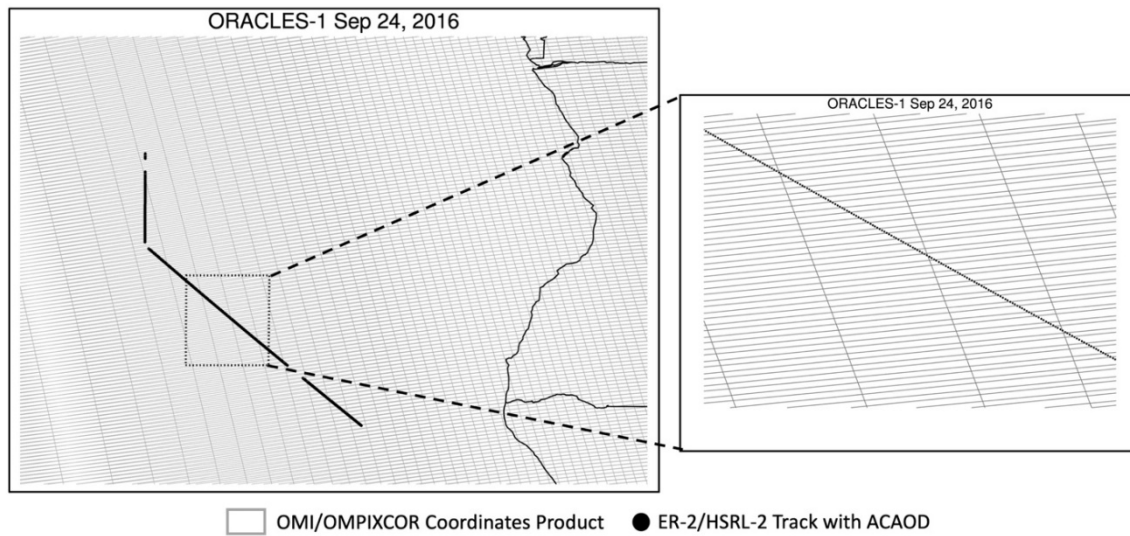


Figure S1. Collocation of HSRL-2 measurements of ACAOD (dark filled circle) with the Aura/OMI pixel polygons (grey boxes) obtained from the OMPICOR FoV75 pixel corner coordinate product for the ER-2 flight operated on Sep 24, 2016, over the southeastern Atlantic Ocean.

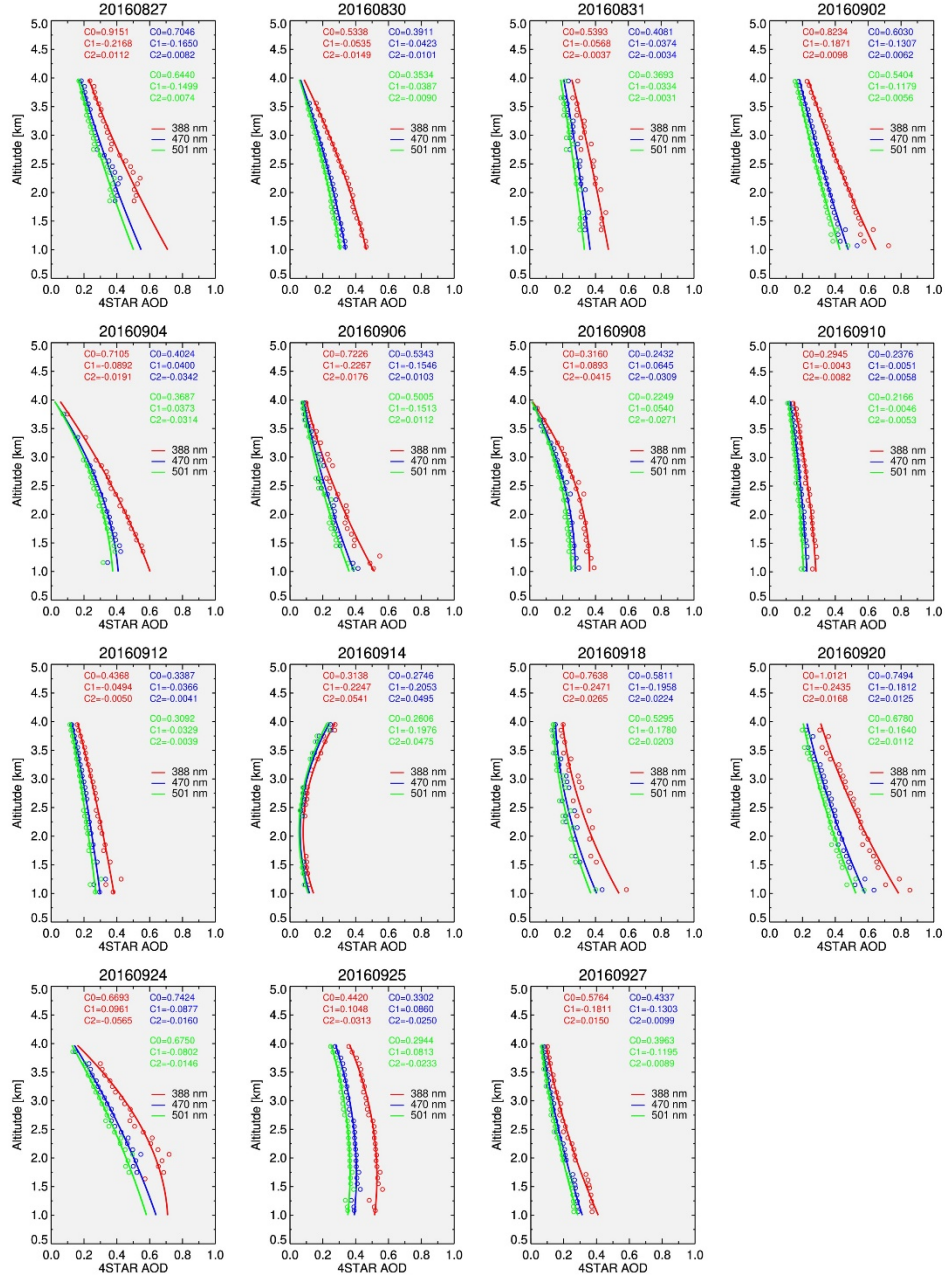


Figure S2. Altitude-averaged vertical profiles (colored circles) of spectral AOD at 388 nm (red), 470 nm (blue), and 501 nm (green) wavelengths corresponding to the column above the aircraft measured by 4STAR Sunphotometer onboard P3-Orion flights operated during the ORACLES-1 September 2016 deployment. AOD measurements were aggregated for each altitude grid size of 0.1 km between 1.0 km and 4.0 km to derive an average vertical profile and associated altitude versus AOD quadratic polynomial (solid lines). Coefficients of fitted quadratic relation for the three wavelengths are printed within each plot.

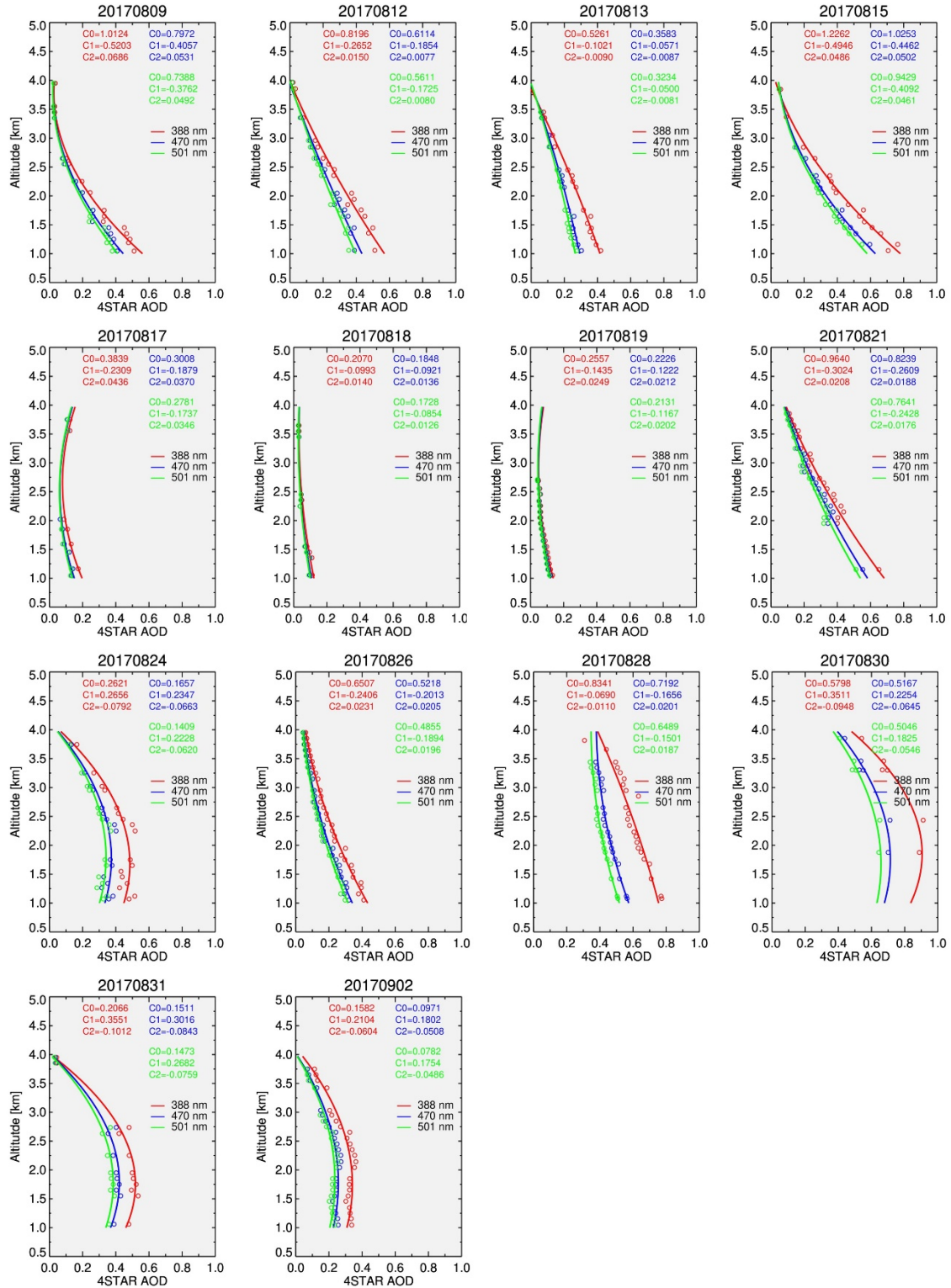


Figure S3. Same as in supplemental Figure 2 but for the 4STAR/P3-Orion flights operated during the ORACLES-2 August 2017 deployment.

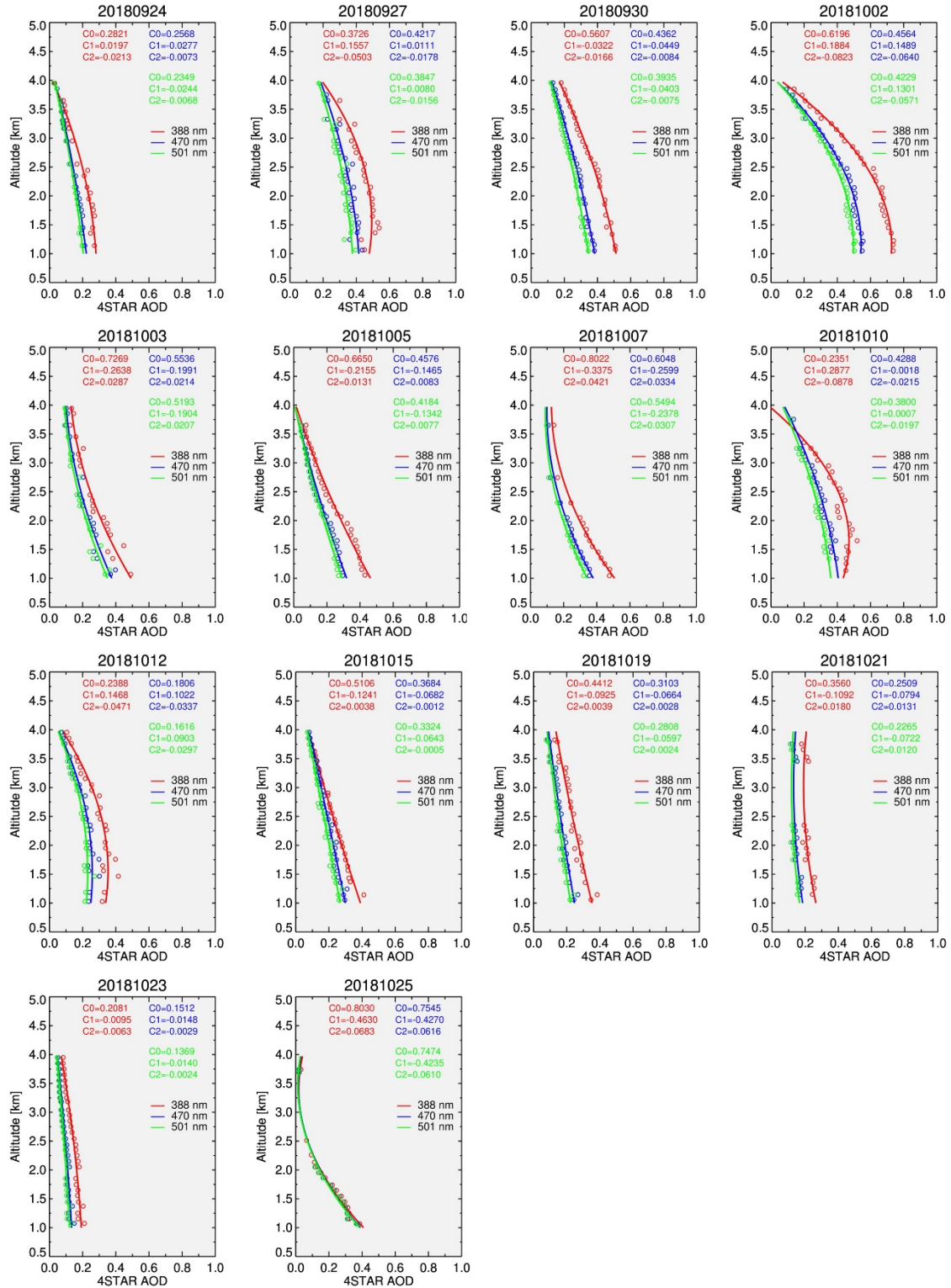


Figure S4. Same as in supplemental Figure 2 but for the 4STAR/P3-Orion flights operated during the ORACLES-3 October 2018 deployment.

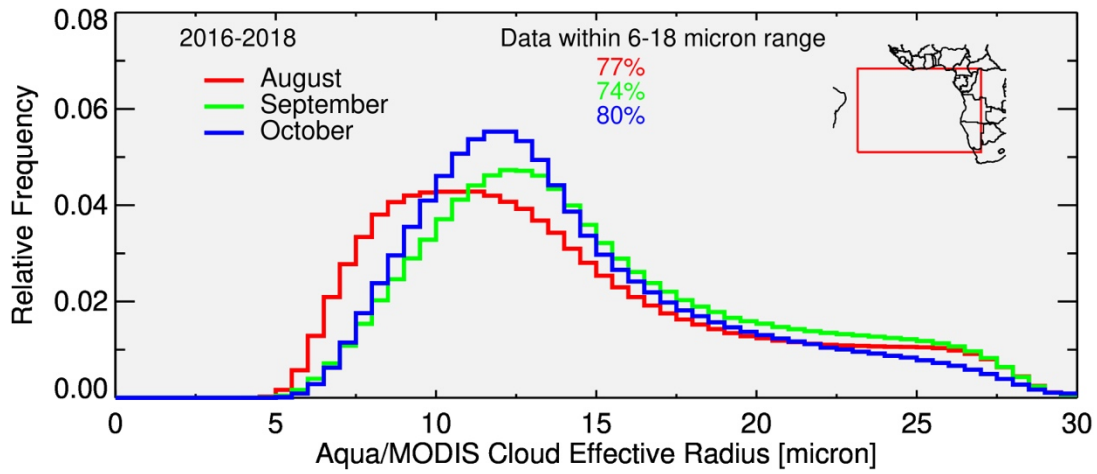


Figure S5. Histograms of the Aqua/MODIS cloud effective radius retrievals (MYD06_L2 product) over the southeastern Atlantic Ocean for the ORACLES deployment period of August through October, 2016-2018.