Comment on amt-2021-378
John Reagan (Referee)

Referee comment on "Assessment of tropospheric CALIPSO Version 4.2 aerosol types over the ocean using independent CALIPSO-SODA lidar ratios" by Zhujun Li et al., Atmos. Meas. Tech. Discuss., https://doi.org/10.5194/amt-2021-378-RC1, 2021

This is a most comprehhensive, well written paper that carefully assesses the data and enumerates limitations of various assumptions made in the data assessment. It presents the best assessment/prediction to date of retrieved aerosol lidar ratios and AODs obtained from CALIPSO observations, made possible using the independent CALIPSO-SODA lidar ratio retrievals for comparison. Uncertainties in the CALIPSO Version 4.2 and the CALIPSO-SODA retrievals, and biases they contribute, are carefully considered. Discussions about agreements/disagreements in the comparison results are well reasoned and extensive.