Quality and Consistency of the NASA Ocean Color Data Record

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ABSTRACT

The NASA Ocean Biology Processing Group (OBPG) recently reprocessed the multi-mission ocean color time-series from SeaWiFS, MODIS-Aqua, and MODIS-Terra using common algorithms and improved instrument calibration knowledge. Here we present an analysis of the quality and consistency of the resulting ocean color retrievals, including spectral water-leaving reflectance, chlorophyll *a* concentration, and diffuse attenuation. Statistical analysis of satellite retrievals relative to in situ measurements will be presented for each sensor, as well as an assessment of consistency in the global time-series for the overlapping periods of the missions. Results will show that the satellite retrievals are in good agreement with in situ measurements, and that the sensor ocean color data records are highly consistent over the common mission lifespan for the global deep oceans, but with degraded agreement in higher productivity, higher complexity coastal regions.