EVALUATION OF OCEAN COLOR PRODUCTS IN THE NORTH ATLANTIC OCEAN ABOARD THE ONE OCEAN EXPEDITION 2025

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Satellite ocean color helps in understanding the physical and biogeochemical processes occurring in the ocean due to its high spatiotemporal coverage, essential to characterize the impacts of extreme events, and monitor trends and changes in water quality. We aimed to evaluate Level 2 Ocean Color products from the Sentinel-3 Ocean Land Color Instrument (OLCI) as well as drone multispectral data, using *in situ* observations. Water samples were collected at the surface in 26 stations across the North Atlantic Ocean during the European Space Agency's Ocean Training Course aboard the One Ocean Expedition 2025. They were filtered onboard using GFF filters for chlorophyll-a (Chl-a) and suspended particulate matter (SPM) concentrations. *In situ* Chl-a and SPM samples were analyzed according to standard procedures. Sentinel-3 OLCI Level 2 products for the campaign were obtained and processed for water quality retrievals. Match-up protocols followed EUMETSAT's recommendations for Ocean Color product validations. For drone data validation, a DJI P4 Multispectral with an integrated multispectral imaging system was used to collect data on the water surface. Analysis of the datasets is ongoing, and results will be available for presentation at the conference. The results of these validation efforts help determine which sensor provides the best estimates for the North Atlantic Ocean and improve satellite estimates in the open ocean.