

OCEAN OPTICS XXIV

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Tuesday, October 9

Poster Session 2

10:30–12:30

Poster 253

VIIRS OCEAN COLOR PRODUCTS FROM SNPP AND NOAA-20

In this presentation, we provide an overview of the progress on producing accurate global ocean color products from the Visible Infrared Imaging Radiometer Suite (VIIRS) onboard the Suomi National Polar-orbiting Partnership (SNPP) and NOAA-20 satellites. SNPP and NOAA-20 were launched on October 28, 2011 and November 18, 2017, respectively. VIIRS global standard ocean color products include normalized water-leaving radiance spectra nL_w at VIIRS five spectral bands, chlorophyll-a (Chl-a) concentration, water diffuse attenuation coefficients at the wavelength of 490 nm, $K_d(490)$, and at the domain of photosynthetically available radiation (PAR), $K_d(PAR)$. In addition, new products of nL_w at VIIRS imaging I1-band (638 nm for SNPP and 642 nm for NOAA-20) and a quality assurance (QA) score are now included. VIIRS global ocean color products are being routinely produced using the Multi-Sensor Level-1 to Level-2 (MSL12) ocean color data processing system. Specifically, we describe our effort for the improvements of MSL12, particularly over coastal and inland waters, as well as some evaluations with in situ data from the Marine Optical Buoy (MOBY) and various AERONET-OC sites. Furthermore, we provide VIIRS ocean color data from both SNPP and NOAA-20, as well as from merged global Chl-a and $K_d(490)$ data from the two VIIRS sensors, showing significantly improved data coverage. Some examples from the recently developed data gap-filling technique for VIIRS-SNPP are also presented and discussed.

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