**VIIRS Ocean Color Products**

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**ABSTRACT**

The Suomi National Polar-orbiting Partnership (SNPP) has been successfully launched on October 28, 2011. The Visible Infrared Imaging Radiometer Suite (VIIRS) onboard the SNPP, which has 22 spectral bands (from visible to infrared) similar to the NASA’s Moderate Resolution Imaging Spectroradiometer (MODIS), is a multi-disciplinary sensor providing observations for the Earth’s atmosphere, land, and ocean properties. In this presentation, we provide some extensive evaluations and assessments of VIIRS ocean color data products, or ocean color Environmental Data Records (EDR), including normalized water-leaving radiance spectra *nLw*(l) at VIIRS five spectral bands and chlorophyll-a concentration, and diffuse attenuation coefficient at 490 nm *Kd*(490) (and at the photosynthetically available radiation *Kd*(PAR)). Specifically, VIIRS ocean color products derived from the NOAA Multi-Sensor Level-1 to Level-2 (MSL12) ocean color data processing system, which is the NOAA official data processing system, are evaluated and compared with those from in situ measurements, as well as ocean color data derived from MODIS-Aqua. In addition, VIIRS Sensor Data Records (SDR) or Level-1B data have been evaluated, showing ocean color products are extremely sensitive to the SDR data quality. In particular, VIIRS SDR and ocean color EDR have been compared with a series of in situ data from the Marine Optical Buoy (MOBY) in the waters off Hawaii. Our results show that VIIRS is capable of providing high-quality global ocean color products in support of the science researches and operational applications. Our vicarious calibration effort for improving VIIRS ocean color products will also be discussed.