

OCEAN OPTICS XXIV

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Monday, October 8

Poster Session 1

16:00–18:00

Poster 224

COMPARISON OF GOCI AND VIIRS OCEAN COLOR PRODUCTS IN THE WESTERN PACIFIC REGION

The first geostationary ocean color satellite sensor, Korean Geostationary Ocean Color Imager (GOCI), which has eight spectral bands from the blue to the near-infrared (NIR) wavelengths, has the unique capability with hourly measurements during daytime to provide short-/long-term environmental monitoring such as water optical, biological, and biogeochemical variability in the marine ecosystem. GOCI measurements cover the western Pacific region, including Bohai and East China Seas, which are one of the most turbid regions in the world. It has been shown that GOCI ocean color products such as normalized water-leaving radiance spectra derived using an iterative NIR-corrected atmospheric correction algorithm are significantly improved compared with the original GOCI products. In this presentation, we show results of GOCI ocean color products from its entire mission derived from the Multi-Sensor Level-1 to Level-2 (MSL12) ocean color data processing system to characterize diurnal, seasonal, and interannual variations in water optical, biological, and biogeochemical properties. In addition, GOCI ocean color products are compared with those of the Visible Infrared Imaging Radiometer Suite (VIIRS) using the NIR and shortwave infrared (SWIR) combined atmospheric correction method. GOCI and VIIRS ocean color products are also compared with in situ measurements. It will be shown that VIIRS ocean color products are quite accurate and highly stable in open oceans, and much improved in highly turbid coastal and inland waters. Furthermore, GOCI measurements are important to provide diurnal information that the polar sensor cannot provide. Some detailed data analyses and discussions for GOCI and VIIRS results will be provided.

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