



Development of the atmospheric correction algorithm for the next generation geostationary ocean color sensor data

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The geostationary ocean color imager-II (GOCI-II), designed to be focused on the ocean environmental monitoring with better spatial (250m for local and 1km for full disk) and spectral resolution (13 bands) than the current operational mission of the GOCI-I. GOCI-II will be launched in 2018. This study presents currently developing algorithm for atmospheric correction and retrieval of surface reflectance over land to be optimized with the sensor's characteristics. We first derived the top-of-atmosphere radiances as the proxy data derived from the parameterized radiative transfer code in the 13 bands of GOCI-II. Based on the proxy data, the algorithm has been made with cloud masking, gas absorption correction, aerosol inversion, computation of aerosol extinction correction. The retrieved surface reflectances are evaluated by the MODIS level 2 surface reflectance products (MOD09). For the initial test period, the algorithm gave error of within 0.05 compared to MOD09. Further work will be progressed to fully implement the GOCI-II Ground Segment system (G2GS) algorithm development environment. These atmospherically corrected surface reflectance product will be the standard GOCI-II product after launch.