

EARTH OBSERVATION SYMPOSIUM (B1)  
Earth Observation Sensors & Technology (3)

Author: Dr. Handol KIM

Korea Aerospace Research Institute (KARI), Korea, Republic of, hkim@kari.re.kr

GEOSTATIONARY OCEAN COLOR IMAGER (GOCI), OVERVIEW AND PROSPECT

**Abstract**

So far, the ocean color sensors have been developed and used mainly on low-Earth-orbiting (LEO) satellites, to obtain the multispectral visible and near infra-red images of oceans. The example of these sensors includes MODIS, SeaWiFS, and MERIS, among others. These ocean color sensors are capable of supplying highly accurate water-leaving spectral radiance with high spectral and spatial resolution at a global revisit period of approximately two to three days. However, relatively low frequency coverage of these sensors, further reduced in the presence of clouds or sun glint, makes it somewhat inadequate to resolve processes operating at a shorter time scales. Geostationary Ocean Color Imager (GOCI) has been developed to provide a monitoring of Ocean Color around the Korean Peninsula from geostationary platforms in a joint effort by Korea Aerospace Research Institute (KARI) and EADS Astrium under the contract of Communication, Ocean, and Meteorological Satellite (COMS) of Korea. Currently planned to be launched onboard COMS in late 2009, GOCI will be the first ocean color imager to operate from geostationary orbit. The GOCI instrument completed its production and has been integrated onto the COMS satellite alongside with the COMS Meteo Imager (MI). The main mission of GOCI is to significantly improve ocean observation from previously low orbit service by providing high frequency coverage from geostationary platforms. GOCI is designed to provide multi-spectral data to detect, monitor, quantify, and predict short-term changes of coastal ocean environment for marine science research and application purpose. This paper gives an overview of the mission objectives of GOCI, its major system requirements and an overall description of the instrument design and main characteristics. It also addresses the baseline operational concept of this instrument and finally talks about the potential areas of applications and expected values to the end users in the world remote sensing community.