Update of GCOM-C/SGLI Leaf Area Index & fraction of Absorbed Photosynthetically Active Radiation products

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The Japan Aerospace Exploration Agency (JAXA) launched the Global Change Observation Mission - Climate (GCOM-C) satellite on December 23rd, 2017. The 1st version of the GCOM-C/SGLI Leaf Area Index (LAI) and fraction of Absorbed Photosynthetically Active Radiation (fAPAR) products were released on December 2018. LAI and fAPAR were estimated based on the look-up tables showing the relationships between the multi-angle atmospherically-corrected surface reflectance data and the LAI or fAPAR. The relationships between LAI/fAPAR and surface reflectance data at the top of canopy were simulated using a radiative transfer simulator, the Forest Light Environmental Simulator (FLiES) [1].

This year, we are planning to release the 2nd version of the products, in which the algorithms and the data quality will be improved. In this research, we introduce the current situation of the Leaf Area Index (LAI) product and summarize the updates for the 2nd version of the products.

[1] H. Kobayashi *et al.*, A coupled 1-D atmosphere and 3-D canopy radiative transfer model for canopy reflectance, light environment, and photosynthesis simulation in a heterogeneous landscape, *Remote Sensing of Environment*, **112** (2008), 173-185.

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