Japan Geoscience Union Meeting 2015
(May 24th - 28th at Makuhari, Chiba, Japan)

ACG09-24 Room:301B Time:May 28 12:15-12:30

Validation Plan of GCOM-C/SGLI Standard Products

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GCOM-C (Global Change Observation Mission -Climate) project aims to observe a global, long-term climate change and environmental change of the Earth, to implement Global Change Observation Mission (GCOM) as with GCOM-W (-Water). GCOM-C satellite, carrying a SGLI (Second generation Global Imager) sensor, is scheduled to be launched in the end of Japanese Fiscal Year 2016 and is designed to conduct optically-based measurements related to the atmosphere, ocean, cryosphere and land.

29 geophysical parameters are defined as GCOM-C/SGLI standard products, which are essential for achieving the goals of GCOM mission. The accuracies of each SGLI product are divided in 3 phase for the observation project: release threshold accuracy, standard accuracy and target accuracy. The 'release threshold accuracy' is the minimum level for the first data release at 1 year after launch. The 'standard' and 'target' accuracies correspond to full- and extra success criteria of the mission within 5 years after launch respectively. The release threshold accuracies of the standard products are basically evaluated through the comparison with those derived from other satellite sensors at same spatial coverage and temporal periods and/or with ground-based observation network such as flux tower site data, AERONET, buoy data and so on. For the evaluation of the standard and target accuracies, several field campaigns are also being prepared.

In this presentation, we are going to introduce an outline of validation plan for GCOM-C/SGLI standard products and discuss the possible collaboration of in-situ data and validation methods between atmosphere, ocean, cryosphere, and land category of GCOM-C and between other satellite such as EarthCARE and GOSAT.

Keywords: GCOM-C, SGLI, validation, standard product