Very early results of snow observations with the use of GCOM-C/SGLI data

*Masahiro Hori¹, Teruo Aoki², Knut Stamnes³, Wei Li³, Nan Chen³, Rigen Shimada¹, Tomonori Tanikawa⁴, Masashi Niwano⁴

1. Earth Observation Research Center, Japan Aerospace Exploration Agency, 2. Okayama University, 3. Stevens Institute of Technology, 4. Meteorological Research Institute

The "Global Change Observation Mission-Climate" (GCOM-C) is a project of Japan Aerospace Exploration Agency (JAXA) for the global observation of the Earth environment. The GCOM-C is a part of the JAXA' s GCOM mission which consists of two satellite series, GCOM-C and GCOM-W (Water). GCOM-C carries a multi-spectral optical radiometer named Second Generation Global Imager (SGLI), which has special features of wide spectral coverage from 380nm to $12 \,\mu$ m, a high spatial resolution of 250m, a field of view exceeding 1000km, two-direction simultaneous observation, and polarization observation. The GCOM-C satellite was successfully launched from the Tanegashima Space Center in Japan on December 23, 2017. From the SGLI data snow-related variables such as snow and ice cover extent, snow grain size, and snow surface temperature are planned to be retrieved and released to the public around the end of 2018. These snow physical variables are important for determining spectral albedo and radiation budget at the snow surface. In this presentation, very early results of snow observations with the use of SGLI and the validation plan are introduced.

Keywords: GCOM-C, SGLI, Snow cover, Snow grain size, Snow surface temperature, Remote sensing