

Glaciological and meteorological observations at East GRIP site, northeastern Greenland Ice Sheet

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A new satellite, GCOM-C (Global Change Observation Mission - Climate) was launched in December 2017. The GCOM-C carries optical sensors, SGLI (Second Generation Global Imager) and conducts surface and atmospheric measurements related to the carbon cycle and radiation budget, such as clouds, aerosols, ocean color, vegetation, and snow and ice.

To validate the data which are obtained by GCOM-C/SGLI, glaciological and meteorological observations were conducted at East GRIP (75°38'N, 36°00'W, 2704m a.s.l.) from 29 June to 18 July 2018. We conducted snow-pit observations (Fig 1), snow sampling, measured the specific surface area of snow using near-infrared reflectance, performed sunphotometry observations, and measured spectral albedo and bidirectional reflectance of snow surface (Fig 2).

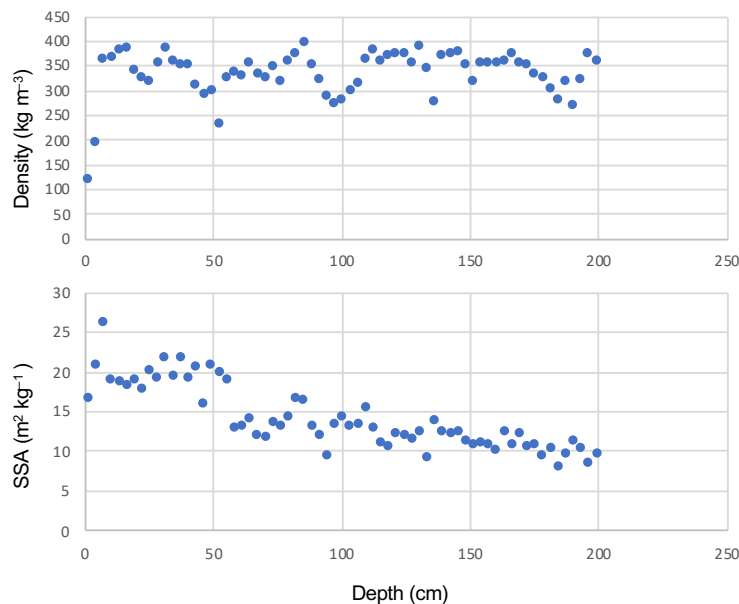


Figure 1. Vertical profile of density and SSA (specific surface area) of snow pack at East GRIP on 5-July, 2018



Figure 2. Sunphotometry observation and measurements of spectral albedo and bidirectional reflectance of snow surface at East GRIP