

Fixed point observation for daily snow surface monitoring along a latitudinal transect from the coast to the inland of Antarctica using camera images

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Snow depth measurements from Syowa Station to Dome Fuji using snow stakes at 2 km intervals have been carried out by the Japanese Antarctic Research Expedition as part of a monitoring program for assessing the surface mass balance of the ice sheet. (e.g., Motoyama et al., 2015). To obtain the daily data for snow surface conditions along a latitudinal transect from the coast to the inland, we have installed snow surface monitoring system at four stationary observation points near the traverse routes (#1, #2, #3 and #4) on November 15, November 23, December 2 and December 13, 2017, respectively (Table 1). The snow surface monitoring system consists of an interval camera and a red-white pole with 20cm-interval. The interval camera was improved by the power supply of a large-capacity lithium battery to be driven for a long term. The image data of this camera are stored to a SD memory card. This poster describes the progress of snow surface observations using camera images and also discusses extracted problems.

Table 1. Stationary observation points

Point number	Latitude	Longitude
#1 (H180)	S69°35.048'	E41°59.603'
#2 (Mizuho Station)	S70°41.910'	E44°16.715'
#3 (Relay point)	S74°00.381'	E42°59.902'
#4 (Dome Fuji)	S77°18.843'	E39°42.771'

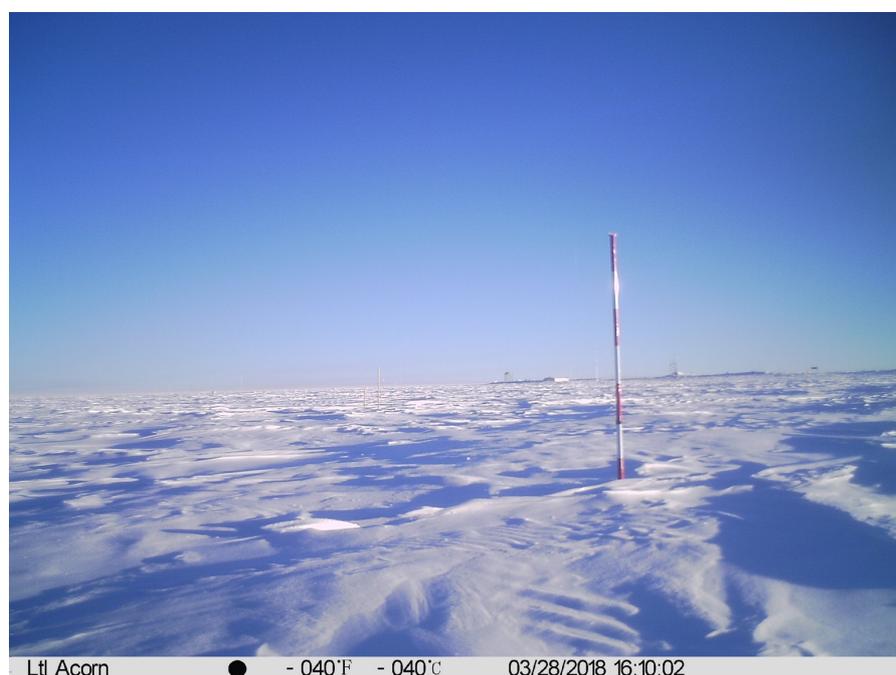


Figure 1. Example of a camera image obtained at #4 (Dome Fuji) on March 28, 2018.

References

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