



Surface velocities at Engabreen produced from time-lapse feature tracking.

Alexandra Messerli (1), Aslak Grinsted (1), Miriam Jackson (2), Nanna Karlsson (1), and Pierre-Marie Lefevvre (3)

(1) Centre for Ice and Climate, University of Copenhagen, Copenhagen, Denmark (messerli@nbi.ku.dk), (2) Norwegian Water Resources and Energy Directorate (NVE), Oslo, Norway, (3) Department of Geosciences, University of Oslo, Oslo, Norway

A six month long time series of images was collected from an automated camera located on the valley sides at Engabreen, northern Norway. The viewshed of the camera overlooks the dominant icefall of Engabreen. This viewshed was chosen for a number of reasons, namely that the icefall is punctuated by deep crevasses and easily tracked features. It is also difficult to instrument the icefall and so alternative methods were needed to obtain velocity measurements, and finally there was already an existing solid mast for mounting in place.

Here we present velocity fields over the icefall from 2013 and compare these to SAR produced velocity fields. The velocity fields are produced for periods where interesting subglacial and hydrological events have been identified. We detect the events from various discharge records at the glacier and pressure cells at the base of the glacier, located in the Svartisen Subglacial Laboratory (SSL).