H09: Measuring and modelling glacier change

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Session Description

Measuring and modelling glacier change is central to understanding the current health of glaciers and for predicting future glacier change. Ice conditions and surface processes affect both the mass balance and flow characteristics of glaciers. While measurements of ice velocity and deformation, mass balance, and glacier hydrology have a long history, there are a number of opportunities and challenges that persist. Field and remote sensing techniques continue to provide new data about environmental and ice conditions, such as energy balance and ice velocity. This allows for finer resolution of variables that affect glaciers, including ice formation and melt as well as hydrological conditions. Replicating these observations with physically-based and statistical models and interpreting the results often provides a new understanding of factors that control glacier change but the spatial and temporal variability can make it difficult to generalize interpretations. This session will focus on research that aims to increase our knowledge about glacier change through novel field observations, physically-based and statistical models, as well as remote sensing. We welcome submissions that address questions of how to better understand and represent spatial and temporal changes of mass balance and ice change.

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