

## **Seismic and satellite observations of calving activity at major glacier fronts in Greenland**

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The interaction between oceans and large outlet glaciers in polar regions contributes to the budget of the global water cycle.

We have observed the dynamic of sizeable outlet glaciers in Greenland by the analysis of seismic data collected by the regional seismic network Greenland Ice Sheet Monitoring Network (GLISN) trying also to find out correspondence in the glacier tongue evolution derived by the observation of satellite images.

By studying the long-period seismic signals at stations located at the mouth of large fjords (e.g. ILULI, NUUG, KULLO), we identify major calving events through the detection of the ground flexure in response to seiche waves generated by iceberg detachments. For the time spanning the period between 2010-2014, we fill out calving-event catalogues which can be useful for the estimation of spatial and temporal variations in volume of ice loss at major active fronts in Greenland.