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With the global climatic warming, the Arctic represents a specific target for studies on the impact of environmental changes on human settlements. Among numerous post-glaciation processes, rockslope failure events represent a risk in inhabited areas in the next future. To improve our knowledge on these processes and especially their triggered mechanisms, their time scale occurrence (after the beginning of deglaciation), their potential cyclicity related to glacio-isostatic uplift, and their runout distance, it appears essential to observe the last deglaciation impacts on landscapes.
Northern arctic Iceland is the perfect place to study such rockslope failure processes, as the last Holocene deglaciation is quite recent and occurred around 12 000 yrs BP, whereas in other areas it began around 18 000 yrs BP. Numerous studies have been conducted in northern fjords of Iceland. Paraglacial activity was attested by dating between 11 000 and 9 000 yrs BP obtained on two rockslide deposits and 15 others were dated before 4300 BP. The main difficulty remains to precisely define the chronology of these sliding processes studied on land. Here we investigate the submerged parts of large mass-movement events to better understand the runout of such processes.
A geophysical survey (September 2015) was conducted in the Skagafjörður in Sept. 2015, using a Stratabox from Cadden, with a frequency of 3.5 kHz, to observe two submarine toes of rockslides triggered on land. First results show that it is possible to delimitate the submarine part of the slides and to calculate their surface and infer the close to maximum runout distance. Seismic profiles reveal that these deposits seem to be well conserved and are intercalated between visible reflectors (sediment interfaces)..

Key words : paraglacial, rock-slope failure, fjord, geophysics, submarine deposits, runout distance