JUST HOW DEEP IS DUSTY GLACIER?

SFU GLACIOLOGY

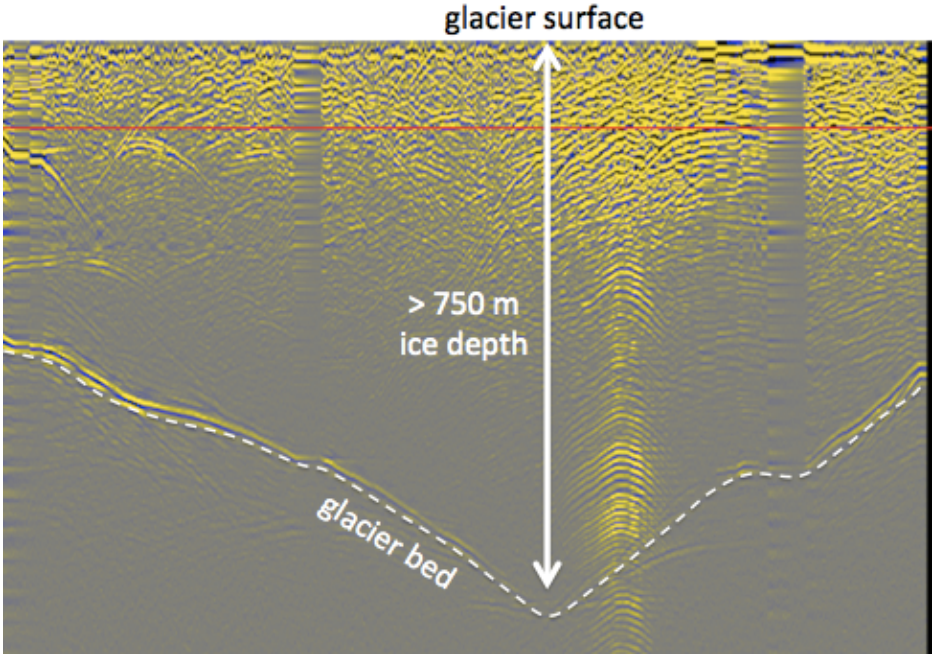
Skyler van Lieshout (above, at right, with SFU team and radar system) joined the SFU Glaciology Group during the 2019 summer field season to help us measure the depth of Dusty Glacier with the Blue System Integration IceRadar (http://www.bluesystem.ca/ice-penetrating-radar.html).

Skyler demonstrated his skill in steering the radar around obstacles and over glacier streams, not an easy task with 50 m (164 ft) of garden hose to manage from end to end!

The IceRadar system sends low-frequency radio waves into the ice which bounce off the rock or sediment underneath and are detected at the surface. By knowing how fast these waves travel, and timing their journey through the ice, we can estimate the ice depth.

We surveyed 5 transects across the lower Dusty Glacier and found ice up to 800 m (half a mile) deep (see image below showing a radar cross-section). The depth of the ice tells us how much freshwater is locked up in this reservoir, and relates to how fast the glacier flows.

Thanks to Skyler and the KFN staff for this collaboration!



For more information or to inquire about opportunities: contact Gwenn Flowers (gflowers@sfu.ca) or visit www.sfu.ca/~gflowers/. We are always looking for enthusiastic KFN community members and youth to join us in the field.