

## Client Meeting - 10/9/19

- Project goals/ideas: want to make measurements right at the boundary between the ice and the ocean, nobody has ever done this before. Trying to come up with ideas of ways to do this. Want it to look something like Sputnik. Have three arms/probes that go out with ice screws at the end, drive up to the glacier, drill it in, and lock it in place, then make measurements. Glacier at question melt rates are 5/10 meters/day. Want to use materials that are inexpensive. Take the BlueROV, somehow attach the arms with the ice screws, and lock it into place. If we can do this, we are there. Once we do that, there are many different techniques that we can use to measure data such as stereo photography, structure from motion. Set up 3 cameras on each leg, maybe put one on a sliding track to take video as it goes, do this every five minutes as we watch the surface so we can map it. One thing that we need to do is communicate from the vehicle, to the autonomous boat, back to the ship. Another option is to inject dye into various places and measure the data with the cameras. There is no mathematical approximation that currently shows us the melt rate of the glacier. Normal approach: put the lander in the glacier, use acoustics, scan the face, and we will get good results. Getting the lander to land on the glacier is a fine enough feat. We have little preconceived notion about this. Need to define a clear project scope and goals, how far we want to take it, what we want to do, etc. Take some time exploring possibilities, figure out how far we can go, etc, keep it manageable. Going to order an ROV pretty soon. Try to research and figure out what we think could possibly work to define the scope. Goal is to get a demo dataset that says we can bolt an ROV onto an iceberg and collect data. Coordinate with CS group, brainstorm, hoan in on a particular goal or two. Three motors/drillbits. Petzl lasers - [backcountry.com](http://backcountry.com), try to figure out how to attach these
- Jonathan's Phone Number: