

Meeting with Jonathan - 10/28/19

- Matt was measuring power output of soldering iron, highest value was 121 Watts and then it drops to 50-75 Watts
- Waterproofing soldering iron tips could be feasible
- Dr. Nash came up with a figure to represent what our idea of the system will look like in hopes of getting research funding in the form of a proposal
- Illuminate the ice surface and measure flows across it using optics - possible way to collect data
- IR camera underwater? Nobody has ever used that before to collect data
- Thermister string - measures temperature along the arm every X distance away
- Fire a narrow beam laser onto one of the arms, use a mirror, and reflect into a sheet on the face of the glacier then use PIV
- Vectrino profiler - used to measure sand ripples, etc
- Could be challenging to get anything to refreeze on the iceberg surface, the glaciers are warmer so once the irons are inserted into the iceberg, we will need to use some sort of barb system to hook them into the iceberg because it probably will not refreeze
- Probably want to build a relay board that will drive multiple irons at the same time
- Matt's idea: instead of attaching the ROV into the iceberg, heat the iron tips and start collecting data once we get close enough to the iceberg, insert the tips into the iceberg, and then once they go all the way in, pull them out and then keep collecting data until the ROV is removed from the iceberg
- Linear actuator? Probably expensive to waterproof
- Start off with sensors on the arms
- Look into inductive motors