5/1/2024

* Amazing day. Sunny and low wind. Was really fantastic for our first day on the ice sheet.
* Pick up by guard at 8:30 at KISS, offdeck at 9:25, landed at 10:00, fully offloaded at 10:15, at pallets by 11:40.
* “Soft” combat offload of 3 pallets out near (in?) the science sector to the SW of the southerly end of the airstrip. This was actually quite a soft landing. The loadmaster said that he would put the rear door lower than usual and it appeared that it was actually dragging on the snow. Can’t imagine a softer way to put down the cargo, even with a forklift.
* Pallets ended up about an average of 450’ apart from each other.
* Upon arrival at pallets, we took apart the nets and had a team work on getting the fuel system put together for fueling the snow machines. Loaded two Nansens.
* Navigated to our site which was about 0.2 miles along the same line that the aircraft took from the airstrip (i.e., towards the SW). Did some site survey by setting up a flag line that runs from 150-330 degrees using GPS and points almost directly at the DYE-2 site. This line is the spine of our camp.
* Over the course of the next hours we did a few more cargo loads to get all of the Day 1 cargo and some of the Day 2 cargo, including 2 solar panels. During some of these loads, we also had to re-connect the leads on the batteries and get them started. Batteries were also transported.
* Full group set up Mess tent. Plywood floor first, then tent, then fly, then staking and covering the fly flaps. Inside had some tent floor canvas covers and tent floor foam. Tables, kitchen gear, camp power system, chairs, cot, etc.
* One team set up 5 individual tents while another team dug the trench for the batteries. Installed foam board below the batteries and connected camp power to batteries. Upon initial start the batteries still read 100% at 10pm. This is after being outside and at cold temperatures since 9 am and with the battery boxes being opened to reconnect.
* Set up toilet tent, along with deep trench hole and toilet box.
* Finished up the camp set up, with some securing of items around the camp, including our pile of transported cargo that was sitting outside.
* Lunch during the day was just snacks. Dinner was very late, about 10pm or after, cooked using the propane stove to heat up water, set up outside of the tent because of a smell when it was operated inside.
* Used a generator for a couple of hours to put on a heater inside the tent to get things a bit warmer.
* Last person to bed at about 2:30am, with no expectations for when the team would start the next day.
* Cat thinks (after a couple days of reflection) that we should not have pushed so hard on this first day because it resulted in some people getting injuries that manifested after a couple of days.
* Clear and cold day with weak winds.

5/2/2024

* Mostly clear, sunny day.
* People woke whenever. Breakfast burritos cooked on the airfryer operated off of the camp power. Late start to work
* 12 noon, battery check. Batteries at 95% still even with overnight of self heating. Only 5% usage for more than a day of outside temperatures.
* Transported the rest of the solar panels and distributed on the surface.
* Set up the solar panels on boxes and with all cable connections to the MVP. The connectors has some snow in them so that required careful cleaning of the snow.
* In parallel, set up workshop tent and staged all of our supplies, food, extra camp gear, and tools inside.
* Set up water mine and gray water pit (covered with board).
* Made some improvements to the kitchen.
* Full set up of camp power, with connection to its sets of solar panels. Mostly sunny, with power production often about 1000W.
* Set up Starlink. This took a while, possibly because it was cold and needed to self heat. Alignment also took a bit. But then it worked and was pumping 30-250 mbps. The Starlink was set up on the table in the Mess tent.
* Clear and cold day, weak winds.

5/3/2024

* Mostly clear, sunny day. Winds slowly picking up during the day.
* Morning ritual. Stretching, breakfast, morning meeting, etc.
* Camp power system and the MVP Central both had errors in their solar charge controllers.
* By 9am the MVP system had charged fully by the time the sun set the previous night and the batteries had only consumed 2% of their power for self heating during the night. Outside T was about -35C.
* Tasking for the day: Radio chargers, inside garbage can, swap some coolers around.
* Set up the comms antennas on the MVP Central.
* Installed SLEIGH jacks.
* Assembled and installed the MRR instrument on the SLEIGH.
* Added appropriate breakers to the ceilometer to control the heater.
* Installed the ceilometer instrument on the SLEIGH.
* Installed the MWR on the SLEIGH.
* Another clear and cold day, but the NE winds started to pick up and we started having some drifting. Had to do some general maintenance of tents with walls, etc.
* Von got swollen hands and was diagnosed and treated by Cat.
* Spectacular optical display today.
* Tomorrow forecast: Fair >> partial cloudy. Winds N-NE 10-15 knots decreasing to 5-10. Temp -28 to -18 C. ANG flights will not start until Thursday (5/9) tentatively.

5/4/2024

* Mostly sunny today, with a brief afternoon period with some relatively thin cloudiness. N-NE winds made it a bit chilly to work. Temperature in the range of -20 to -28 C.
* Great food today. Ramen soup for lunch. French lentils and air fried naan for dinner. Made kale chips in the air fryer that were fantastic.
* Additional supplies needed: Bring a spare rapid water boiler in case one breaks. Also bring a spare pot for the air fryer. Bring a plastic shovel.
* Next time: Duct tape the bottom channel on the solar panels so the captive nets are easier to access.
* Work today: Repositioned and arranged the solar panels for eventual install. Started putting the legs on. Also swapped the camp power to another set to accommodate our eventual install. Installed the blower-heater on MWR and some of the insulation. Installed part of the met system and asfs support bars. Fixed some power connector boxes. Started building some anchors.
* On the power system: When the solar controllers get cold, their communication went down and when they came back up they were conflicted over which was the master and which the slave. This was solved by reseting the Link2 battery management system, through the solar interface (which can be done remotely). The signature of this issue is an oscillation in the power from on to off on a scale of a minute. Overall this decreases the efficiency of the system and needs to be corrected. We should determine a way to identify this remotely.
* Spectacular optical display today. Took 360 photos of the display. Andrew: “The light show was fucking cool”
* Tomorrow forecast: Fair >> mist/fog. Winds variable 2-6 knots. Temp -30 to -20C.

Ideas for better maintenance of health.

* Set an upper limit on the weight of individual components.
* Limiting first day installations to only setting up camp. Ensure that proper meals can be had, especially dinner
* Better preparation of pallets to be sure that we can only focus on camp
* The batteries can last for multiple days on their own so they do not need to be dealt with right away.
* Daily check-ins with all people

5/5/24

* Mostly sunny day (a bit of fogginess) with weak wind, made for nice conditions to work.
* Finished up connecting the MWR wiring, worked on some ASFS instrument installations, built more anchors.
* Installed the full, 4-unit, southern PV array vertically. Included drilling and compacting holes, then pouring a liter of water down them to freeze. We ended up not using the 4x4 blocks under the legs as it seemed like these were not necessary. Then with the full team raised the panel units with two people holding the legs down and two people walking the panel up to standing from one side. Then four people worked together to lift the full unit up and lower it into the holes. At this point they stand on their own and the anchor holes can be dug and anchors put in place. We dug 6 of the anchor holes and started to build up the system for anchoring.
* Decided that each adjacent PV panel could share an anchor with the next. This decreased the total number of holes needed.
* To Bring for demob and future installs: ice breaker bar(s), more metal spades including short ones.

5/6/24

* Mostly sunny with a bit of fog. Weak wind. Generally nice day for working, especially in the afternoon it was the nicest we have had. Pushed the work day to after 7 pm because of the nice conditions.
* Surveyed for two turbines. Soldered the turbine cable connectors and wired them into their combiner boxes. Drilled holes in the same way as those for the PV system. Measured and dug three anchor holes. The holes were about 15’ from the center pole and 26’ from each other at a depth of about 3’ down to the center of the anchor. The attachment point on the turbine mast is at about 12’ high. Raising these required the full team but could probably be done with just 2 people if needed. One person holds the bottom and guides it into the base pipe while the other person (people) raise the turbine mast by walking it up. Once in the base pipe, a single person can stabilize the mast while the other person (people) deal with the guy lines. We waited to drill the guyline holes down to the anchors until the mast was up so we could get the correct angle of the guy lines down to the anchors. Then worked our way around to the three anchors connecting them each. Then the system was leveled and pulled down tightly with one person using a level on the mast and the other tightening the appropriate guylines.
* We will consider if we can only install 2 wind turbines and not the planned 4. This would save on a bunch of work and it is clear that we do not actually need the turbines for power generation as the PV appears to be way more than enough. Even when it is cloudy they seem to generate enough power to float our scientific station. Michael has some concern that the system will not work with only two turbines, but this is something we will evaluate over the next days.
* Also worked on additional anchor holes for the PV panels installed yesterday.
* Made some further progress on connecting the wires on the ASFS instruments.
* Dinner was udon noodles with kimchi and goachen sauce and a kale-cabbage-tahini salad. After dinner we had hot chocolate with Mexican chili liquor (one day late on cinco de mayo).

5/7/24

* Morning off for people to do what they want and recover from the past couple of hard days. Late morning treat >>> cinnamon rolls cooked in the insta pot. Wow what a treat. Followed by an leek-mushroom frittata topped with chevre and a roasted sweet potato with a dash of garlic and onion for a mid-day meal.
* Weather is fair with increasing winds from the south.
* Working on more wire connections and dressing on the SLEIGH
* Finished up the anchors for the installed solar panels
* Filled some holes that would not be re-used
* Tested out the lite probe and sent file to Mike T.
* Surveyed for potential turbines 3 and 4.

5/8/24

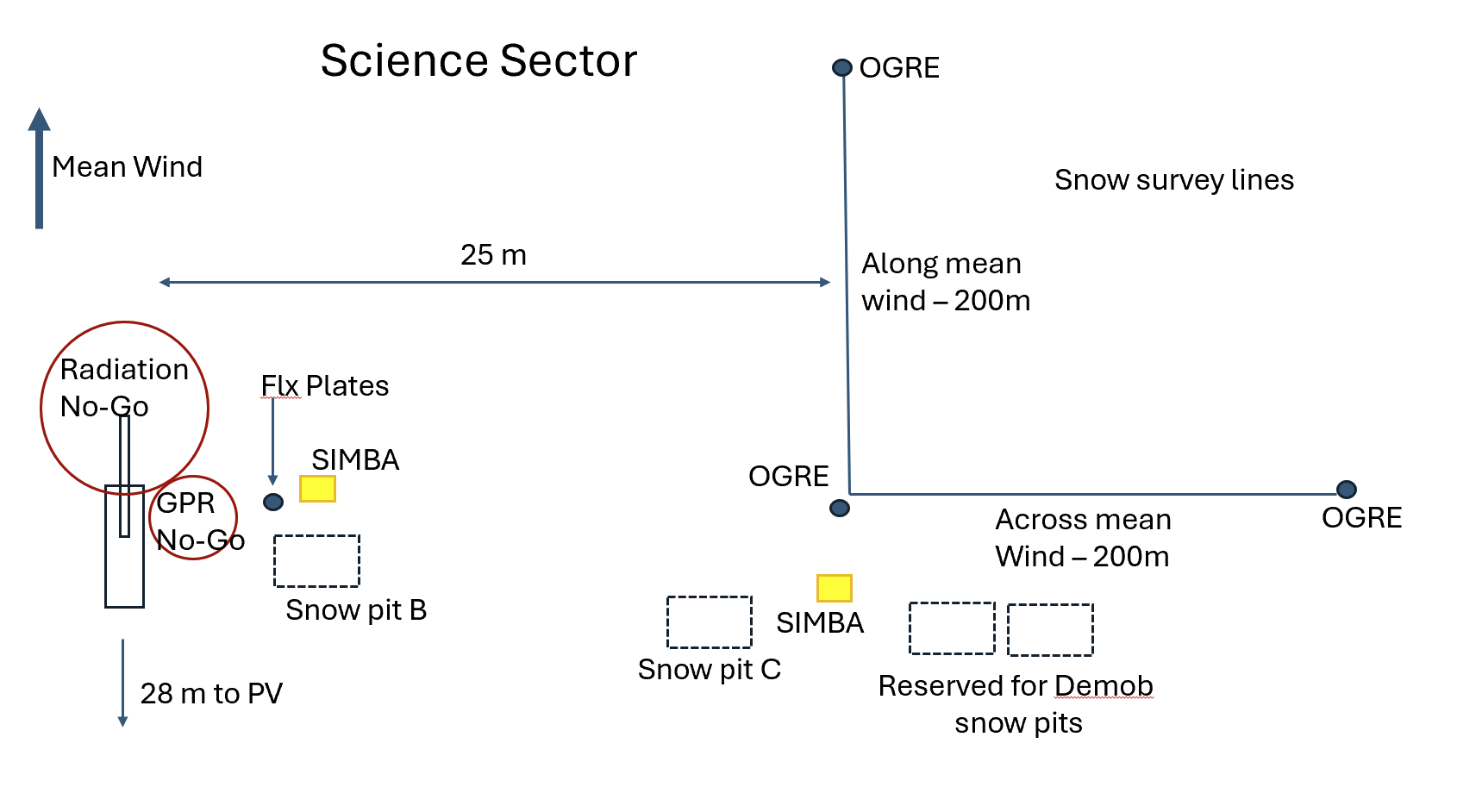
* Increasing W-SW wind has lead to significant drifting in camp. Overcast clouds, snow, blowing snow.
* Additional flagging in camp to provide a line to the toilet in poor visibility and to more clearly mark the remaining open holes that could be a hazard.
* Secured some of the PV cables and kept them above the drifting snow
* Diagnosed the wind turbines and Michael made some adjustments so they would function properly.
* Finished many remaining SLEIGH install items: SIMBA connection, Flux plates, OGRE, Ceilometer heater, MWR fiber, Iridium, cameras.
* Started ASFS part of SLEIGH. Big accomplishment!
* Installed the W PV array into standing position, put in the three W side anchors
* Andrew did some Dashboard programming to be ready for the incoming data and to add forecasting details.

5/9/24

* Continued wind but it has moved around to the S. Some additional drifting overnight but the drifting decreased during the day. Temperature warming up into the negative single digits today.
* Drift management in camp and around equipment.
* Installed the east side anchors for the W PV array.
* Secured additional cable, including all of the cables for the installed PV components.
* Connected AC cable to SLEIGH and started up the larger instruments.
* Solved a small MWR problem to get it running. Ceilometer is running. MRR is running. Most ASFS instruments are operational. A problem with the pressure and RH measurements, both probably due to the pressure. There might be an issue with the height specification. Also an issue with one of the sky cameras.
* Mounted wifi, bluetooth, and iridium antennas for MVP
* Installed the last set of PB panels vertically.
* We pulled some power to run our water heater off of the SLEIGH AC power drop.
* Got the Iridium transfers operational from the SLEIGH to Santa. Hope to have the Dashboard operational by tomorrow (just need to deal with a file permissions issue).
* Tasks for the next couple of days (which should be warm with weak winds): Deploy SLEIGH to its final location, install the SIMBAs, conduct first snow surveys, dig snow pit, do the GPR survey.
* On a sunny mellow day: Need to ventilate the Brain and Central.

5/10/24

* Tested Central iridium connection.
* Lots of general assessment of the test data from the SLEIGH.
* Fixed some SLEIGH camera issues.
* Swapped out the Vaisala met system to one that does not have a pressure issue. That worked and now the met data looks good.
* Marked out the final anchor holes for the PV system.
* Surveyed/flagged the SLEIGH installation site and snow transect corner.
* Made progress on the dashboard.



5/11/24

* Weather generally fair with modest SE-S winds, Temperature -18 to -10C.
* Day off for everyone.
* Visit to DYE-2 site.
* Anchored and filled 2 holes.

5/12/24

* Cloudy with some light snow. Relatively weak winds and pretty warm out.
* Finalized the SLEIGH instrumentation: Sky camera, OGRE, etc)
* Built and started all of the 3 other OGREs. One has a low charge battery leading to an error.
* Assembled the SIMBA mounts
* Started developing and building anchors for the guylines for SIMBA, OGRE, and POPS.
* Practiced a snow pit using all of the snow science instruments. Data was sent to Mike Town for evaluation.
* Moved the SLEIGH into position. It was moved to its final position and the jacks were put down to leave marks on the surface. Then the SLEIGH was pushed backwards and we dug small holes down to the hard layer at about 1 m depth. Some footers were installed; these were made of stacked 4x4’s and 2x4’s for a total of 8.5” of total height. We then slid the SLEIGH back forward into position and cranked the jacks to bring the SLEIGH into level in both axes. The total depth from the base of the jack feet (on top of the footers) to the bottom of the fixed part of the jacks was: 28” (back R), 29” (back L), 29 ⅛” (front L), 29 ½ (front R).

5/13/24

* Mostly overcast, with a few periods of partial clearing. Winds picked up a bit from yesterday, but still not so back. A little drifting.
* Last night the MVP got down to 94% state of charge. This is with only 75% of the PV and 50% of the wind. Thus, we expect that it would have been more like 96% or higher. And this was after a completely overcast day yesterday.
* Cat assessed the remaining food and made a list of good things to use for the remaining days.
* Finished the final 3 PV anchor holes and anchor installation. Mounted and dressed the final PV cables.
* 18:20 UTC >> Start of most observations. This followed the leveling of the important instruments on the SLEIGH including the radiation suite (based on the SWD bubble level), the SPN-1, and the MRR. There remains a small discrepancy between the SWU and SWD levels despite being mounted to the same plate.
* Continued work on the dashboard plots.
* Installed autonomous SIMBA
  + Marked all of the thermistors with a marker starting from #1 at the top and then every interval of 10 through the final one at the bottom of the string at #240. It is not clear to us yet if the “air temperature” thermistor is the first or the last data point in the files.
  + Wrapped the end of the support pole in bubble wrap. Used 2” kovacs to bore a 30” hole and installed the support pole in that.
  + Built and installed a wooden outrigger that is about 45 cm long. Used 2” kovacs to drill a hole as deep as possible below the end of the outrigger. This took many passes with a lot of up-pulling to clear out more of the cuttings.
  + String was installed on its support pole all the way down to the surface (thermistor #100), then looped back up to the outrigger support and then dropped off the end of the outrigger (#150) down through the hole below the end of the outrigger. The surface was at thermistor #180. This means that from the bottom of the thermistors (i.e., #240) there are 60 thermistors and thus the bottom is down at 120 cm below the current surface.
  + Using a level we identified thermistors that were installed at the same height, one on the support pole and one hanging from the outrigger above the subsurface hole. #100 is the same height as #180 (i.e., the surface) and #80 is at the same height as #160.
  + The thermistor #241 (air temperature) was installed at about 10 cm above the surface at the same height as thermistor #90.
  + The boxes were buried on the S side of the support poles about 18” down.
* Installed SLEIGH SIMBA
  + Nearly identical to the other. The only difference is that the thermistor #80 is at an equal height to #161 and the surface height is at thermistor #182.

5/14/24

* We are confirmed on the extraction flight on 5/20. They will keep an eye on the weather and might bump to 5/19 if the conditions on 5/20 are looking questionable.
* Marked 200m survey lines in the direction of the mean wind and orthogonal to that.
* GPR transects. E>W, 16:51:00 - 16:55:30 UTC; W>E, 16:58:00 - 17:02:40; N>S, 17:08:30 - 17:12:15; S>N, 17:14:15 - 17:17:50; Powered down. 17:23 UTC. Then set up back on the SLEIGH system pointed towards the sky. (Turns out that the sample rate was not set to higher frequency such that this survey was meaningless, other than a bit of exercise).
* OGRE installations. Height of GPS antenna base. West = 200.6 cm; Corner = 213.4 cm; South = 203.2 cm; SLEIGH =246.4 cm.
* Height of the SR50 from the surface at 19:20 UTC = 191.8 cm
* N-S lite probe survey.
* Programmed heater toggling script for the large instruments and have confirmed that it works.
* Checked and tightened all bolts on the PV systems.
* Guyed the SIMBAs and POPS. These were with 4x4s on strings buried about 50-60 cm down.

5/15/24

* MVP was at about ~85% in the night (4am) and was set to turn off heaters at 85%. This functioned. Then the PV brought the system up to 91% by the time we checked it in the morning. Now turning the heater threshold to 75% so we can exercise the system over a wider range. This will be an approximation for our first routine threshold. At some point later in the summer we might experiment with a lower threshold to see if we can get the battery state of charge lower.
* Pushed the dashboard live, although there continue to be a number of issues with it along the way.
* Full science snow pit near the SLEIGH and the SIMBA. Included density, shear, hand tests, and more.
* Installed the flux plates by cutting a narrow channel in from the side of the pit towards the SIMBA. The plates were installed at -25cm (plate A), -50 cm (B), and -75 cm ( C) with the red side up and foil covering the plates. They are about 50 cm to the north of the SIMBA. The plates were installed, backfilled, and stabilized by about 21:30 UTC.
* Installed a new sonic because the old one was having an issue. Michael did his best effort to align the sonic N with true local N
* Built a cargo pallet with empty boxes and got this staged for pulling with the piston bully
* Built two wind turbines for installation tomorrow.
* Worked on a ventilation system for the MVP Central as it has a tendency to overheat.
* Working on fixes for the sonic.

5/16/24

* Sunny, breezy, and really cold in the morning. The winds decreased to very little in the afternoon and it was very nice then.
* Installed the final two wind turbines. They did not spin up right away but by the next morning were spinning.
* Flagged out snowpit areas for the demobilization team over near the remote SIMBA site. These are flagged with green and red flags.
* Trued and plumbed all of the PV panels so that they are straight upright. Secured all knots.
* Supported power lines in key areas to support tension relief and ease of identification.
* Built a battery cover roof (but will test and improve tomorrow).
* SLEIGH power test with the 75% threshold for turning off the big instrument heaters was implemented.
* Finished the E-W lite prove survey.
* GPR transect was implemented again, with a higher sampling rate and an attempt to move slower such that 200 m is covered in about 10min. E to W was 17:56:42 - 18:05:00; W to E 18:07:40 - 18:17:25; N to S 18:22;25 - 18:32:15; S to N 18:36:10 - 18:47:06. After that, did a shovel test by holding a shovel under the GPR as it was mounted at about 1m above the surface. Times were: No shovel (19:06:40 - 19:09:40), Shovel right on the sensor (19:09:40 - 19:11:40), 25% down (19:11:40 - 19:13:40), 50% down (19:13:40 - 19:15:40), 75% down (19:15:40 - 19:17:40), resting on the surface (19:17:40 - 19:19:40), then no shovel (19:19:40-19:22:40). Powered off at 19:22:40. All times are in UTC. It looks like all of this data was mapped onto the dashboard in a strange way, as if the ingest didn’t recognize that the time sampling was different. There was a long period when the system was off (prior to being reprogrammed) and then sampling faster, and then powered off and reprogrammed, and then sampling in its standard way. Thus, the stair step appears around 17 - 19 UTC in the plots.
* Did some fixes on the data logging for the sonic, licor, and met.
* Dressed up the final cables for the SLEIGH. It is pretty much finished except for the grounding.
* We believe that we have all data streams operational to our TIME 0, starting time for the dataset is 21:30 UTC on 5/16/24. Many data streams were operational well before this point, but their data should be used with caution.
* Finalized a cargo pallet and Brian (PFS-Raven) was able to pull the pallet with the Piston Bully. This is important in that it means he can pull our others and we do not have to transport all of our cargo all the way back to the taxi way for the air strip.

5/17/24

* Sunny, windy, and cold in the morning.
* MVP threshold of 75% for turning off the heaters was implemented but was not reached over the night, in part because some of the heaters shut themselves off yesterday afternoon because of their own internal thresholds. They must have been warm enough already.
* Started dealing with the final battery hole configuration. Drilled holes in the foam board underneath to allow for water drainage. Decided to NOT use the roof because we want to see how the system will behave with the batteries are exposed. This will be important information for future deployments.
* Dealt with grounding of the SLEIGH via one single grounding rod installed on the east side with a grounding cable going to the data logger grounding post.
* Did some radiometer and sonic leveling adjustments to make subtle improvements to each. Levelled the sonic at 12:45 - 13:00 UTC. Leveled the SPN-1 and radiation at 13:00-13:30 UTC. Swapped out the LWU sensor because there was an issue with some of the data.
* “Michael tinker” jobs, including small fixes on cameras and other details.
* Full snow pit was conducted by Von and Andrew over by the SIMBA. This was a detailed pit that took much of the day showing some very interesting details in the vertical structure of the snow, firn, and ice.
* Dealt with digging out the pallets and getting them prepped for transport. Packed one pallet with empty boxes and crates. Brian (Raven camp) came and dragged the pallet successfully back over to the taxi way. This is important because it means that he can probably drag the other pallets with the Piston Bully such that we do not have to transport all of the equipment/gear all the way back to the taxi way ourselves.
* Started work on a ventilation system for the MVP Central with some hoods made from food containers and a pass through filter with some holes.
* Had a Cincoze problem! The system will not boot stably. Yikes this is a big deal. Swapped in the old Cincoze system but swapped in the new memory, OS drive, and data drives. This replacement system booted and worked, but initially had an issue with its second NIC. That was solved and the system appears to be stable. Re-installed this into the SLEIGH. This caused a period of outage on many of the measurements.

5/18/24

* Nice day. Took the morning off to relax a bit after some hard days.
* Trenched around the outside of the batteries so there is an area of light snow for water drainage.
* Flux plates appear to be wired wrong (or at least linked to the wrong label in the code). Michael swapped this in the code and so there is a switch between plates C and A.
* LWU issue persisted so it was not the sensor. Swapped the sensors back and swapped out the sensor cable and re-connected. This appeared to solve the issue. Looks like it might have been related to grounding, possibly of the shielding.
* Dealt with the replacement Cincoze NIC issue.
* Started to take down and pack many of the things that are not needed any more around camp. Took down the workshop tent and all associated components.
* General camp clean up, snow management.
* Packed a second pallet with all of the hazmat and a lot of additional gear and equipment. Got almost everything on there except for the basic camp equipment that we needed and a few boxes of scientific gear.

5/19/24

* Very nice day again.
* Full day was dedicated to final details and breaking down camp.
* Three personal tents broken down and secondary personal bags packed. All extra equipment packed including by the end of the day the full kitchen and communications systems. Everything was packed on the last pallet, which Brian had staged right next to camp. The only things that were left for the leaving day were two personal tents, with minimal stuff inside, the toilet tent, and the mess tent where three people had moved their sleep kits. All of the tents that were still standing had been prepped for disassembly, dug out, and some stakes removed. All cots, chairs, tables were packed.

5/20/24

* Nice day again. Awake at 6am.
* Took down the remaining personal tents and the toilet tent. Took down the mess tent and got the plywood on the pallet, then piled on all of the other bags and gear. Netted and strapped the pallet and Brian dragged it at about 8:15 am over to the taxi way.
* Team took some last pictures and then transported over to Raven Camp.
* Tried to burn off fuel from the snow machines, but were unsuccessful in using or pumping the fuel down below about 40% full. The ANG ended up accepting the machines anyway.
* Raven camp (Katie) provided fresh baked blueberry muffins and coffee for the team.
* ANG cleared all of the cargo and loaded it. Flight back to Kanger was smooth.
* In Kanger, pallets were taken to the warehouse and we worked to get all of the PFS gear back to Shannon, including a hand cleaning of the kitchen box, pee bottles, etc.
* Sorted, repacked, and documented the remaining food. Included cleaning the digi-boil, water boiler, and the air fryer. Remaining food is documented in the Raven 2024 drive under the food folder.
* Sorted and repacked all of the scientific equipment. This included putting together a number of boxes to be transported back to Scotia that contained equipment that would not be needed, such as spare scientific components and parts. All empty boxes and crates, and other equipment that would be needed for the demobilization, including the remaining food, was stored in a sea-container outside the warehouse provided by PFS. Cargo going back to Scotia was eventually put in the CU sea-container that is outside the main warehouse space on the ANG base.
* All activities except for a bit of cargo paperwork were completed today. Nice work team.

5/21/24 Team debrief meeting

* Safety discussion: In retrospect, what safety concerns came up and what could we have done to provide for a safer work environment for our team?
  + Make lighter loads / boxes. More but lighter boxes.
  + Safety is all about team communication and building a culture where it is acceptable and comfortable to bring forward concerns at any time. We did a pretty good job with this, but could always keep doing a better job. This is particularly important for people who feel like they might not have as big of a voice as others.
  + Team cohesion is super important for safety and success of the mission. We discussed the importance of handing off this notion to the demobilization team.
* Debrief on our Preparation
  + It was good to break things down into Priority levels instead of into a specific set of daily plans because of uncertainty about how much can be accomplished, the impact of weather or other events, the well-being of people, etc. Identifying priority levels of different activities helps to then set the individual daily activities as those days occur.
  + Pre-field meetings were very important for helping to establish expectations, priorities, culture, communication, familiarity, etc.
  + Getting the team together before the field work was also very useful because it helps to support familiarity.
* Gear / supplies that we were missing and/or will be needed for the demobilization team. Those things needed for the demobilization team are listed with a (DEMOB).
  + Ice breaking equipment. Picks, shovels. (DEMOB)
  + Somewhat more complete hardware kit.
  + Pack of resistors
  + Spare tea kettle (DEMOB)
  + Insulation for Digi-boil
  + Another saw
  + Multiple epoxies. These tend to get hard to use after being opened and used the first time.
  + Everyone should have Trango 3 tents. Trango 2 is too small (DEMOB)
  + Yak Trax for traction on ice (DEMOB)
  + Lifting support, ropes, etc. (DEMOB)
  + Small battery operated vacuum for tent cleaning
  + Full height broom
  + Longer cables on MVP!!!
  + Longer extension cords in general. And more extension cords.
  + More fresh veggies (DEMOB)
  + Spare sheet foam for various purposes
  + Insulated, waterproof boots (DEMOB)
* Discussion of demobilization
  + General concept: Do some snow science upon arrival, then take down science installations first, then turbines and most panels, then finally the rest of the power system. This will leave some portion of the power system to serve as camp power and it can be converted to that at the start and then be one of the last things to be packed up. This also allows for most of the batteries to be dug out and moved as needed to support their eventual transport.
  + The hardest activities during demob: MRR, MWR down lifting and packing. Solar panel digging out legs and moving. Batteries digging out and moving. Anything else that needs to be dug out fully like the SIMBAs, flux plates.
  + Agreed that we need 4 people. This will allow for teams of 2 to transport things and not leave anyone alone. We also discussed in detail some thoughts and concerns about the current team.
  + Discussed the possibility of having camp over by Raven and to only go to the science site to de-install and bring back equipment each day. There was not agreement on this concept but it should be discussed in more detail. There were a few details came from later communications with the Raven staff
    - It is possible to camp near Raven, but it is probably best to have this on the south side of the air strip because the area to the north is reserved for ANG activities.
    - If equipment is being transported on Nansen sleds, this can be transported across the ski way and does not need to go around the end of the ski way. This means that a more direct route to Raven (and the pallets on the taxi way) can be achieved. Only requirement is communication with Raven folks to ensure there are not aircraft activities planned at the time of crossing.

Things to test later in the summer after we have a reasonable data set in the can:

* Turn on a relatively high threshold for turning off the heating cycles on the large instruments (75%). But later in the summer set the threshold lower to test its behavior.
* Turn on the Iridium full time to start the summer. This will be an extra 50W of power as it sits idle but then it is always available for logging on. Then later in the summer evaluate how to turn the Iridium off for some part of the day.