

SPADE Minutes - September 11, 2018 @ 1400 EDT

Participants: Julie, Aurelie, Stephen, David, Jeremy, Greg, Juris, John, André (minute taker)

Field Visit September 20-21, 2018

September 20, 2018 - Nipika Installation

- Instruments will be installed near river on Nipika property
- Stephen has been in contact with the staff at Nipika
 - No issues with us being there 24/7
 - They have array of large solar panels that we may be able to use
- What we need to ask Nipika staff:
 - Need to figure out how we are going to get power for the disdrometer and MRR
 - Will selection of solar panels work?
 - Can we use the power already available on site?
 - Need a trailer on site during the two month campaign to house laptops, but also for researchers
 - Jeremy addresses concern about wildlife such as porcupines chewing through tires
 - Check with staff if they've had issues in the past
 - Jeremy to bring chicken wire in case

Instruments and Power Requirements

- MRR
 - If we don't heat the MRR it doesn't take up a lot of power
 - MRR - uses 25 W to run. Heating can use a max of 500 W.
 - Greg to send manuals for MRR to me and group.
 - If we do not get the heater setup, we just use a broom to gently wipe the MRR dish
- Jeremy brings up power requirements with a change in data collection interval.
 - Met station is configured for 15-minute intervals.
 - Geonor is currently collecting once an hour.
 - Jeremy to change it to 15-minute intervals to copy Fortress set up
 - At Nipika we might need to figure out a different power configuration if we go to 1-minute intervals during the field campaign
- Greg suggests adding another datalogger temporarily during the field project at Fortress
- Need specs for disdrometer and MRR for power requirements
- Second site in Fortress Valley (gas station) to be similar in elevation as Nipika.

- Both Fortress stations are equipped with a met station, disdrometer, geonor and MRR and 1 lidar (either at the top or in the valley)

LIDAR

- Able to scan the valley for wind field
- get wind profiles from up to 3 km
- cloud base, but quickly attenuates if there is any liquid in the cloud
- Circular scanning
- Useful for complex terrain wind flows
- Lidar will produce the most amount of data, we need to know we have enough space.
 - We need to plan for power
- John discusses two of the sites with power at Fortress Mountain
 - Power line clearing (site visited May 2018),
 - Ridgetop - 15 m tower on top of a ridge
 - Potential spot for lidar installation

September 21, 2018 - Fortress Mountain site visit

Accessibility at Fortress Mountain

- They have sheds and a visitor area to shelter the researchers
 - Computers are stored in Campbell Scientific housing
- No shed/shetler right in the vicinity of powerline, but only a 5 minute walk to shelter
- Fortress staff are receptive to 24/7 access
- Might need to bring trailer
- Need to verify with Fortress staff

Fortress Gas station

- Greg has been in correspondence with gas station owner
 - They are receptive to having a trailer parked during the 2-months
- Greg to ask owner of gas station to meet with us on Friday first thing in the morning
- Geonor and met station at gas station will be provided by ECCC

Other instruments and inventory

- Sonar - profile temperature and wind speed up to 400 m. Wind field structure. Vertical profile, attenuates after 400 m.
 - E.g. Lidar in the valley, sonar up top
 - However, generally need a tech there to run it with a generator.
- Geonor and met station (UNBC) at Nipika Resort.
- Fortress Mountain equipped with Geonor and met station (USask)

- Geonor and met station (ECCC) at gas station.
- 3 MRRs available (NCAR, USask, ECCC)
- NCAR can provide 1 or 2 parsivels.
- UQAM has one parsivel.
- 1 LIDAR to go either at Fortress Mountain or at gas station in valley

Tasks

- Contact Julie on Thursday and Friday evening after site visit.
- After site visit we will make a list of the researchers and who will be looking at what instruments.
- Juris to send data package to GWF.
 - Undergraduate student will work with Juris.

Next Meeting: Wednesday September 26 @ 1400 EDT