

ICECAPS-ACE Weekly Report

August 19 – August 25, 2019

Heather Guy



Nate Bowker making final adjustments to the radiosonde antenna on the SMG, 2019-08-23

General Notes:

It has been a busy week getting into the flow of winter operations, finishing outstanding tasks from the flight period and starting fall season projects such as the biannual station accumulation survey. There has been freezing fog present every day this week and associated heavy riming of instrumentation. We've also seen some colder temperatures, as low as -40C on 08-23. There were a couple of unplanned power outages at the start of the week related to issues with the microturbine generator, station is now running on the generator in the SMG.

General Weather Observations:

Date	Time (Z)	Wind	Weather	Visibility	Sky	Temp	Notes
8-19	12	166°, 6 kn	FZFG	3200	OVC002	-18	
8-20	12	47°, 4 kn	FZFG (distant)	4800	SKC	-23.8	North winds in am.
8-21	12	222°, 6 kn	FZFG (clearing)	4800	BKN004	-20	
8-22	12	028°, 3 kn	FZFG (distant)	9999	FEW032	-23	1 in. fresh snow overnight. North winds.
8-23	12	132°, 8 kn	FZFG	3200	FEW	-28	Cold overnight (-40C)
8-24	12	175°, 10 kn	FZFG	500	VV005	-17	
8-25	12	14°, 3 kn	FZFG	500	OVC001	-14	North winds

Significant Weather Observations:

- 8-23 1400-2000z: Clear skies for checking CAPABL.
- 8-24 0900-1100z: Fog bow.
- 8-24 1230-1406z: Fog bow.

MSF

- 8-19 0846-0848z: Unplanned power outage – microturbine failure. Switched power back to main generator. All instruments supported by UPS.
- 8-19 1935-1936z: Planned power outage to switch back to microturbine. All instruments supported on UPS.
- 8-20 1927-1931z: Unplanned power outage – microturbine failure. Switched power back to main generator. All instruments supported by UPS.

ICECAPS-ACE Data Management:

- 8-19: Data transfer completed at 0516z
- 8-20: Data transfer completed at 0511z
- 8-21: Data transfer completed at 0544z
- 8-22: Data transfer completed at 0512z
- 8-23: Can't open dataman daily logs, terminal keeps freezing. Performed hard reboot at 1910z. After reboot, the /data/ directory is empty, RAID drive does not appear to be mounted. Troubleshooting ongoing – no data transferred today.
- 8-24: Dataman troubleshooting ongoing, no data transferred today.
- 8-25: Dataman troubleshooting ongoing, no data transferred today.

MWR:

- Operating normally.

SODAR:

- 8-23 1250-1305z: Cleaned of snow and levelled.
- Operating normally.

POSS:

- 8-23 1901-1930z: POSS powered down for dataman reboot.
- 8-24 1115-1131z: POSS powered down for dataman reboot.
- 8-24 1741-1817z: POSS powered down for dataman reboot.
- Operating normally.

MMCR:

- Operating normally.
- Red 'added loss' light on TWTA continues to flash.
- 5V#1 and 5V#2 remain out of tolerance.

CAPABL:

- 8-22 1150-1200z: CAPABL powered down to clear snow from window.
- Operating normally.

MPL:

- 8-19 1213-1238z: MPL monthly calibration completed.
- 8-22: Windows recovered from unexpected shutdown, data collection restarted at 1217z.
- Operating normally

VCEIL:

- The ceilometer laser has arrived. A decision about replacing the laser is to be confirmed.
- Operating normally.

IceCAM:

- Operating normally

PAERI:

- 8-23: PAERI internet quicklooks not updating. Von fixed this.
- 8-24: LW/SW responsivity flags red – cleared themselves (possible frost on mirror?)
- 8-25: LW/SW responsivity flags red – cleared themselves (possible frost on mirror?)
- Operating normally

TSI:

- Operating normally

IcePIC:

- No ice pics this week – only snowfall was overnight.

Radiosonde:

- Twice daily launches.
- 8-19: Temperature logger installed in base station cabinet.
- 8-23: Nate Bowker attached guy lines to secure the radiosonde antenna on the SMG.
- Discussion about the correct base station elevation values is ongoing.

MASC:

- Operating normally.

MSF - OPC:

- Operating normally.

TAWO – OPC:

- 8-20: TAWO OPC taken down for re-mounting, to re-route the cable away from a new unshielded power cable possibly responsible for the data outages.
- 8-21 1800z: TAWO OPC remounted in a different location, data collection restarted.
- The TAWO OPC has operated continuously since relocation but is still seeing occasional unrealistic data spikes.

SKYOPC:

- SKYOPC data drops out during power outages as the vacuum pump is not on UPS – recorded in log.
- Operating normally.

CLASP:

- Operating normally.

CPC:

- 8-19: Condensate emptied.
- 8-23: Condensate emptied.
- Operating normally.

Fluxtower instrument suite:

- Enclosure temperature logger collected, temperatures ranged between 15C and 53C inside the electronics enclosure over the last two weeks.
- Operating normally.

INP Freezing assay:

- 8-20 1300-2030z: INP filters exchanged, weekly freezing assay completed, data transferred.
- 8-22: Successful auto-calibration of cold stages A and B.
- 8-22: Successful regeneration of 1 tube of desiccant.
- 8-23: Cold stage C will not auto-calibrate. No control over cold stage temperature.