

ICECAPS-ACE Weekly Report

September 02 – September 08, 2019

Heather Guy



The shadows are getting longer at Summit Station - 20190904

General Notes:

The weather was mixed this week with some very localized snow squalls and varied cloud layers. After some troubleshooting early in the week of the MMCR and the INP cold stages, there was finally time to tackle some ongoing projects such as designing an adaptation for the fluxtower aspirated shields to prevent them being blocked with ice, and building a new backup system for the fluxtower data logging computer.

General Weather Observations:

Date	Time (Z)	Wind	Weather	Visibility	Sky	Temp	Notes
9-02	12	083°, 9 kn		9999	BKN078	-20	
9-03	12	041°, 8 kn		4800	BKN075	-19	North winds. AM light snow.
9-04	12	145°, 12 kn	FZFG in distance	4800	FEW	-25	
9-05	12	202°, 4 kn	FZFG	500	VV001	-23	
9-06	12	106°, 9 kn		9999	SCT030	-27	
9-07	12	186°, 14 kn		800	OVC004	-17	
9-08	12	039°, 8 kn	IC	9999	SCT082	-24	North winds.

Significant Weather Observations:

- 9-03 0930-1800z: Halo.
- 9-03 1930-2030z: Sun dogs.
- 9-04 1200-1800z: Clear skies for checking CAPABL.
- 9-05 1130-1400z: Fog bow
- 9-08 0900-1200z: Halo and sun dogs.

MSF

- Operating normally.

ICECAPS-ACE Data Management:

- 9-02: Data transfer completed at 0656z.
- 9-03: Data transfer completed at 0508z.
- 9-04: Data transfer completed at 0615z.
- 9-05: Data transfer completed at 0748z.
- 9-06: Data transfer completed at 0529z.
- 9-07: Data transfer completed at 0534z.
- 9-08: Data transfer completed at 0527z.

MWR:

- Operating normally.

SODAR:

- 9-02 1119-1131z: Sodar cleaned and levelled.
- 9-06 1358-1407z: Sodar cleaned and levelled.
- Operating normally.

POSS:

- Operating normally.

MMCR:

- 9-02: MMCR errors still present after clearing. No data being collected.
- 9-03 2113-2146z: Performed manual shutdown and reboot of MMCR.
- 9-03 2146z: Normal MMCR data collection resumed.
- Operating normally.

CAPABL:

- Operating normally.

MPL:

- 9-02: Computer time corrected by -6 seconds.
- Operating normally

VCEIL:

- Operating normally.

IceCAM:

- Operating normally

PAERI:

- 9-03 2300z: I received an automatic email saying that all of the PAERI flags were red and online quicklook plots were not updating. I contacted Von and he confirmed everything was OK. No signs of any issues the following morning...
- Operating normally

TSI:

- Operating normally

IcePIC:

- 9-03 1105-1120z: Bullets, bullet combinations, hexagonal plates, triangular plates. 21 photos uploaded.
- 9-06 1515-154-z: Minute columns, hexagonal plates and irregulars. 11 photos uploaded.

Radiosonde:

- Twice daily launches.
- 9-06: Antenna anchors inspected after the moderate windows last week. Strain relief added to cables and main support post stabilized.
- 9-07: Two sondes failed their initial preparation. A third sonde was prepared and the launch was successful.
- 9-08: Evidence of black carbon build up present inside the radiosonde enclosure.

MASC:

- 9-07 1052z: MASC computer restarted due to frozen trackpad.
- Operating normally.

MSF - OPC:

- Operating normally.

TAWO – OPC:

- 9-03 1840z: Replaced TAWO OPC with spare OPC from drone sampling.
- 9-07: Source of TAWO OPC data spikes confirmed to be a prototype ultrasonic frost clearing device that Andy Clarke installed in July. As the device was just a proof of concept, Andy is happy for us to keep it powered down for now.

SKYOPC:

- Operating normally.

CLASP:

- Operating normally.

CPC:

- Operating normally.

Fluxtower instrument suite:

- 9-05: I constructed a prototype adaptation for the aspirated shields that will hopefully prevent the shield from getting blocked with ice. The prototype is currently installed on the MSF roof for testing.
- 9-06: I built a new back up laptop and datalogging system.
- 9-07 1233-1250z: Data collection stopped during computer reboot to try and improve computer performance.
- Operating normally.

INP Freezing assay:

- 9-02: Attempted a repeat autocalibration of CSD and CSC. Both failed and need to be sent back to Leeds for maintenance.
- 9-03 1828z: Three INP filters collected
- 9-04 1100-1400, 1800-2100z: Weekly INP assay completed. CSA flooded internally during assay and was removed. The assay was completed with just two stages, CSB and CSF. Troubleshooting of CSA ongoing.