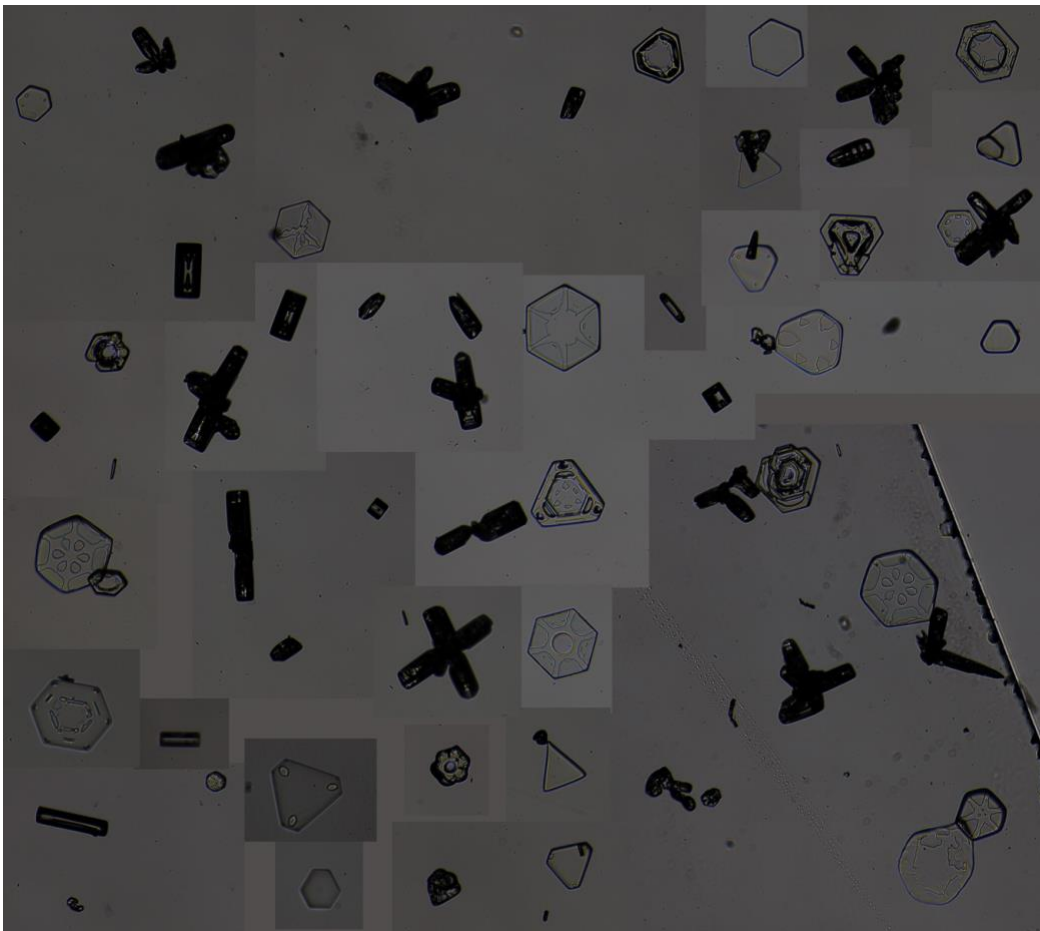


# ICECAPS-ACE Weekly Report

September 09 – September 15, 2019

Heather Guy



*A montage of ice crystal photographs taken during a diamond dust event on 2019-09-12.*

## **General Notes:**

This was a quieter week with some colder temperatures and all instruments operating normally. My focus was mainly on making improvements to the new fluxtower and INP instrument suites. The leak on Cold Stage A was fixed and all three cold stages are now back in operation. I also wrote up instructions on how to switch out the RAID drives on the Dataman computer for when the next technician needs to replace them. Improvements were made to the radiosonde base station cabinet that included installing a filter and sealing holes in an attempt to prevent dirt from the garage entering the enclosure – monitoring is ongoing.

**General Weather Observations:**

Date	Time (Z)	Wind	Weather	Visibility	Sky	Temp	Notes
9-09	12	058°, 10 kn		9999	BKN072	-23	
9-10	12	195°, 6 kn	-SN	9999	BKN047	-24	AM light snow.
9-11	12	343°, 13 kn		9999	SCT066	-32	North winds.
9-12	12	030°, 7 kn	IC	9999	FEW	-23	FZFG in distance, north winds.
9-13	12	046°, 13 kn	SN	3600	OVC020	-24	North winds. SN and BLSN.
9-14	12	077°, 13 kn		9999	FEW	-38	FZFG in distance.
9-15	12	075°, 14 kn		9999	FEW	-32	

**Significant Weather Observations:**

- 9-09 0900-1030z: Sun dogs.
- 9-12 0745-1130z: Sun dogs.
- 9-14 1215-1500z: Fog bow.
- 9-15 1100-1600z: Clear skies for checking CAPABL.

**MSF**

- Operating normally.

**ICECAPS-ACE Data Management:**

- 9-09: Data transfer completed at 0526z.
- 9-10: Data transfer completed at 0526z.
- 9-11: Data transfer completed at 0533z.
- 9-12: Data transfer completed at 0546z.
- 9-13: Data transfer completed at 0549z.
- 9-14: Data transfer completed at 0528z.
- 9-15: Data transfer completed at 0526z.

**MWR:**

- Operating normally.

**SODAR:**

- 9-14 1233-1244z: Sodar cleaned and levelled.
- Operating normally.

**POSS:**

- Operating normally.

**MMCR:**

- Operating normally.

**CAPABL:**

- Operating normally.

**MPL:**

- 9-14: MPL monthly calibration.
- Operating normally

**VCEIL:**

- Operating normally.

**IceCAM:**

- Operating normally

**PAERI:**

- 9-10: Some blue flags – cleared themselves. I'm not sure what blue flags mean...
- Operating normally

**TSI:**

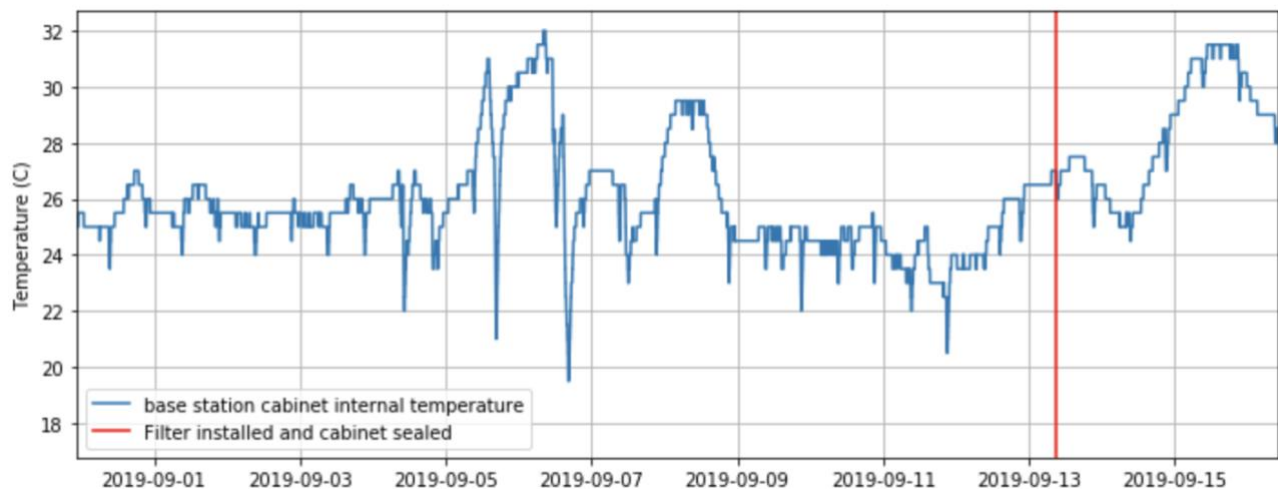
- Operating normally

**IcePIC:**

- 9-10 1145-1230z: Bullet, bullet rosettes and irregulars. 12 photos uploaded.
- 9-12 1245-1215z: Minute plates, bullets and columns during diamond dust event. 32 photos uploaded.

**Radiosonde:**

- Twice daily launches.
- 9-13: Filter installed on inlet fan and cabinet doors sealed.
- See plot below for temperature inside the enclosure over the last two weeks:

**MASC:**

- Operating normally.

**MSF - OPC:**

- Operating normally.

**TAWO – OPC:**

- 9-10 1840z: TAWO OPC swapped back to original instrument (OPC-N3-N2).
- Operating normally.

**SKYOPC:**

- Operating normally.

**CLASP:**

- Operating normally.

**CPC:**

- 9-08: CPC filter changed.
- 9-11: ‘Check Air Inlet Alarm’. Found ice plugging outlet, error cleared once outlet line was defrosted.
- 9-14: Butanol refilled.
- 9-15: ‘Air pump problem, current too high’. Found ice plugging outlet, error cleared once outlet line was defrosted.
- Operating normally.

**Fluxtower instrument suite:**

- 9-09: Wrote and implemented a protocol for rebooting the fluxtower laptop every two weeks.
- 9-13: Finished aspirated shield adaptations, these will be installed this week.
- Operating normally.

**INP Freezing assay:**

- 9-10: Leak on CSA fixed.
- 9-10 1834z: Three INP filters collected
- 9-11: Successful autocalibration of CSA.
- 9-11 1318 – 1830z: Weekly INP assay completed.