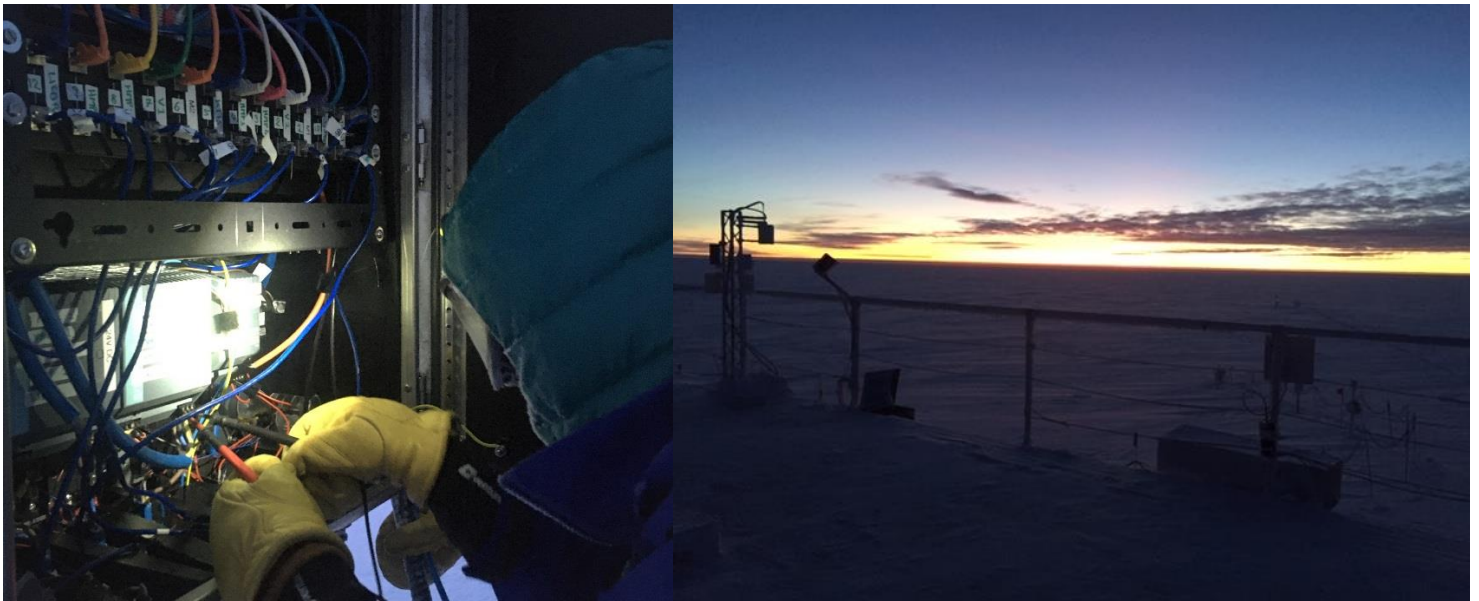


ICECAPS-ACE Weekly Report

November 25 – December 1, 2019

Jess Ackerman



Left: 2019-11-28: TAWO Tech Holly with hands in the Fluxtower electronics box.

Right: 2019-11-25 1224Z: MSF rooftop twilight.

General Notes:

Our big accomplishment this week was finally getting a weather window to do the tedious power supply swop on the Fluxtower! Lots of time, planning, and preparation went into this procedure. On 11/28, with the help of the Station Supervisor Vickie, TAWO Tech Holly and ICECAPS Tech Jess successfully completed the finger and toe-chilling mission in about 4.5 hours. Happy cheers and high-5's were expressed. Also, this week some beautiful twilight hours were enjoyed, and by the end of the week another high blast of winds maxing out at 50 knots.

General Weather Observations:

Date	Time (Z)	Wind	Weather	Visibility	Sky	Temp	Notes
11-25	12	208°, 12 kn		4800	SCT016	-33	Stratus
11-26	12	248°, 14 kn	DRSN	1600	BKN016	-25	
11-27	12	219°, 12 kn		1600	FEW196	-39	Stratus distant
11-28	12	211°, 7 kn	-SN	1600	BKN016	-38	
11-29	12	214°, 10 kn	FZFG	400	FEW000 OVC003	-33	
11-30	12	220°, 13 kn	-SN, FZFG	500	SCT033	-39	
12-01	12	165°, 28 kn	BLSN	100	OVC000	-28	40+ knot winds

Significant Weather Observations:

- 2019-11-27 1254Z: Sun Reflection (pictured below)
- 2019-11-27 1902Z: Rave Ice
- 2019-11-30 1218Z: Rave Ice



Above: 2019-11-27 1254Z: Sun reflection on horizon.

MSF

- 2019-11-29 1515Z: MSF 3x Temperature Logger data downloaded (performed every 56 days).
- Operating normally.

ICECAPS-ACE Data Management:

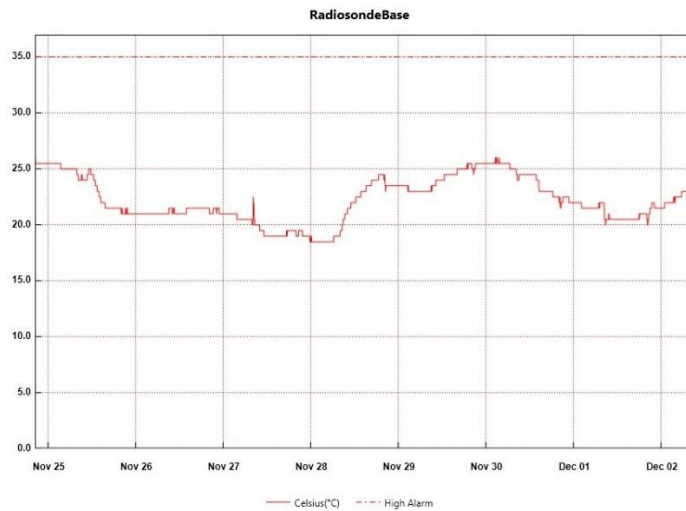
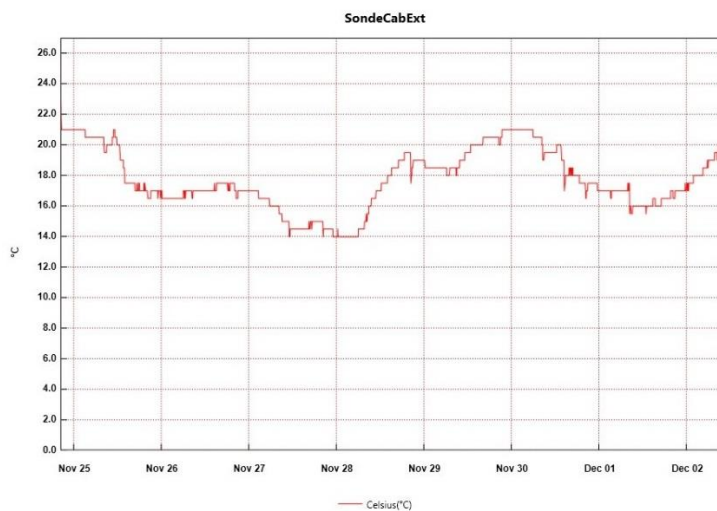
- 11-25: Stop ArchiveToBoulder at 1224Z.
- 11-26: Stop ArchiveToBoulder at 1134Z.
- 11-27: Stop ArchiveToBoulder at 1159Z.
- 11-28: Stop ArchiveToBoulder at 1528Z.
- 11-29: Stop ArchiveToBoulder at 1105Z.
- 11-30: Stop ArchiveToBoulder at 1216Z.
- 12-01: Stop ArchiveToBoulder at 1148Z.

TSI:

- Offline for winter season.

Radiosonde:

- Twice daily launches.
- 2019-11-29 1115Z: Complications with U% and RH% due to misty foggy morning causing condensation on sensor. 3rd attempt successful but outside time window. PI notified.
- 2019-11-29 2315Z: “Radiosonde Preparation Failed” message. 2nd sonde prepared and launched within time window. PI notified.
- 2019-11-30 1129Z: Sonde did flip in air upon gentle/normal release apparently damaging sensor and terminated sounding on its own. 2nd launch completed within time window. PI notified.
- Still troubleshooting USB driver issue for Easy Log USB temp logger program on Radiosonde computer.
- See charts below for temperatures outside and inside the Radiosonde cabinet over the last week.



MWR:

- 2019-11-27 1215Z: Removed light frost from both windows.
- 2019-11-29 1310Z: Removed light frost from 90% of south-facing windows on 150-90 & HatPro. Fans were clear. Misty foggy morning. Picture documented in MWR Riming Photos folder.
- Operating normally.

SODAR:

- 2019-11-26 1414-1433Z: SODAR cleaned.
- Operating normally.

POSS:

- 2019-11-26 1222Z: DC Offset errors during cleaning time.
- 2019-11-29 1349Z: DC Offset errors during cleaning time.
- Operating normally.

MASC:

- 2019-11-26 1342Z: MASC winter shutdown procedure completed. Data collection will resume in warmer temperatures this spring.

MMCR:

- 2019-11-29 1306Z: GPIB interrupted the daily calibration. Errors cleared.
- 2019-11-30 1217Z: Net CDF Errors cleared, and PI notified. Cleared errors again 1344Z.
- 2019-12-01 1224Z: Net CDF Errors cleared. Noticed odd screen images from 1230-1234Z while antenna position was 6 and 38 possibly due to calibration phase. Notified PI and emailed pictures. At 1307Z, cleared CDF Errors again. Reboot imminent.

CAPABL:

- 2019-11-29 1329-1340Z: Laser turned off to clear window.
- Operating normally.

MPL:

- Operating normally

VCEIL:

- Operating normally.

PAERI:

- 2019-11-29 1344-1555Z: Fan unplugged and brought inside to defrost while Outside Air Temp Sensor recon was performed. Currently troubleshooting with PI.
- 2019-12-01 1305Z: High winds likely cause of several red flags all night. Mirror cleaned next morning and all is well.
- Operating normally.

IceCAM:

- Operating normally.

IcePIC:

- No IcePics this week.

CLASP:

- Operating normally.

CPC:

- 2019-11-27 1840Z: Butanol refilled and condensate emptied.
- 2019-12-01 1315Z: Carbon filter changed.
- Operating normally.

MSF - OPC:

- Operating normally.

TAWO - OPC:

- 2019-11-29: Removed TAWO OPC from rooftop to thaw out and diagnose data collection issues. Verified fan functioning properly. Troubleshooting continues.

SKYOPC:

- Operating normally.

INP Freezing Assay:

- 2019-11-27 1341Z: Instrument clock reset for accuracy. Filter samples collected from TAWO, weekly assays run, and data sent. 1344Z: Instrument internal memory downloaded and sent to PI.

Fluxtower instrument suite:

- 2019-11-28: Successfully replaced failed power supply powering flux tower instruments KT15, HMP3 (9m temperature sensor), HMP4 (15m temperature sensor), Ventus2 (9m 2D sonic), Metek2 (15m 2D sonic).



Above: 2019-11-26 1628Z: Big House twilight.