

ICECAPS-ACE Weekly Report

August 31 – September 6th, 2020

Heather Guy



Reinstalling the fixed aspirated shield on the TAWO Met tower; 2020-09-02

Photo: Perri Barbour

General Notes:

The big project this week was replacing the fan in the 14 m aspirated shield on the TAWO Met tower. We used the opportunity to do some preventative maintenance on the 9 m aspirated shield and inspected the rest of the fluxtower instruments and cables before the winter – everything else looked in good condition. Several snow events this week provided the opportunity to get familiar with the IcePICS setup, and by the end of the week I collected some clear photos of bullets and plates.

General Weather Observations:

Date	Time (Z)	Wind	Weather	Visibility	Sky	Temp (C)	Notes
08-31	12	5 kts at 166	FZFG	800	FEW	-29	Fog layer above surface – can see TAWO legs but not building
09-01	12	10kts at 148	-SN	4800	OVC014	-16	
09-02	12	7kts at 142		4800	BKN017, FEW 131	-24	
09-03	12	2kts at 226	-SN	4800	BKN016	-20	Thin low-level cloud all day.
09-04	12	10kts at 190	FZFG	800	SKC	-28	Fog cleared ~1600z. Cloud rolled in 2000z and brought SN/BLSN overnight.
09-05	12	9kts at 200	-SN	4800	SCT033, SCT131	-21	Halo present
09-06	12	7kts at 224	SN	4800	BKN016	-17	

Significant Weather Observations:

- 2020-08-31 0900 – 1000Z: Fog bow
- 2020-09-01 1944 – 2000Z: Sun dogs associated with diamond dust.
- 2020-09-02 0730 – 0815Z: Sun dogs (recorded on iccam)
- 2020-09-04 0900 – 1600Z: Fog bow
- 2020-09-05 0845 – 1130Z: Halo
- 2020-09-06 1320Z: Halo

MSF

- Operating normally

ICECAPS-ACE Data Management:

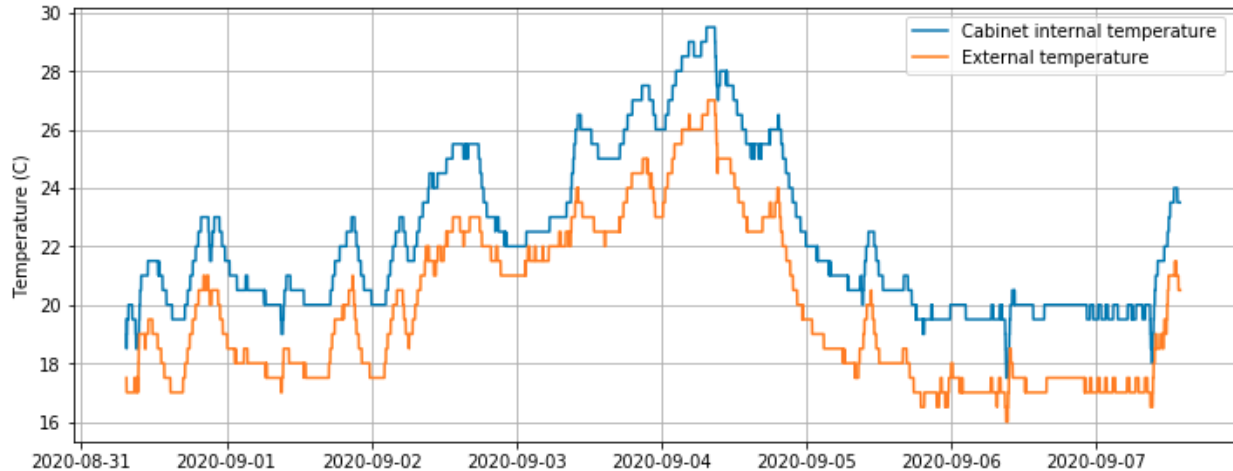
- 08-31: Data transfer completed at 0456Z.
- 09-01: Data transfer completed at 0455Z.
- 09-02: Data transfer completed at 0456Z.
- 09-03: Data transfer completed at 0437Z.
- 09-04: Data transfer completed at 0504Z.
- 09-05: Data transfer completed at 0426Z.
- 09-06: Data transfer completed at 0520Z.

TSI:

- Operating normally

Radiosonde:

- 2020-08-31: SPS connection lost multiple times (for < 5s each) during 12Z launch. Overall launch data looked OK.
- 2020-09-01: Switch to once daily (12Z) radiosonde launches
- See chart below for temperatures inside and outside the radiosonde cabinet over the last week:



MWR:

- 2020-09-04 2008z: Found with error: 'Slave elevation mirror does not respond'. Passed normal daily checks once error was cleared.
- Operating normally

SODAR:

- 2020-08-31 1133-1150Z: Cleaned and leveled the SODAR dishes.
- Operating normally.

POSS:

- Operating normally.

MASC:

- 2020-09-04 1221-1222Z: MASC computer rebooted due to frozen trackpad.
- Operating normally.

MMCR:

- 2020-09-04 1554-1655: MMCR rebooted after persistent 'NetCDF' errors. Reboot took 3 attempts.
- 2020-09-05: MMCR dataman mount down. Reconnected after MMCR router was power cycled.
- 2020-09-06: Transmitter power low (68W) over the last 24 hours. Internal/external temperature and pitch/roll values are out of range and unrealistic. PI contacted.

CAPABL:

- Operating normally.

MPL:

- Operating normally.

CEILOMETER:

- Operating normally.

PAERI:

- Operating normally.

IceCAM:

- Operating normally.

IcePIC:

- 2020-09-01 1200-1230Z: Irregulars, hexagonal plates and stellar dendrites. 8 photos collected.
- 2020-09-03 1140-1210Z: Irregulars, hexagonal and trigonal plates. 22 photos collected.
- 2020-09-05 1130-1140Z: Isolated bullets, hexagonal and trigonal plates. 16 photos collected.
- 2020-09-06 1320-1340Z: Bullets, hexagonal and trigonal plates, columns. 38 photos collected.

CPC:

- Offsite for repairs.

MSF - OPC:

- 2020-09-03 1225-1447Z: Offline for defrost and inspection.
- Operating normally

TAWO - OPC:

- Operating normally.

SKYOPC:

- 2020-09-04 1330-1625: Offline while pump exhaust was re-directed outside of building.
- Operating normally.

Fluxtower instrument suite:

- 2020-08-31 1735-1900Z: 9m and 14m aspirated shields removed from tower for repairs.
- 2020-09-02 1245-1345Z: 9m and 14m aspirated shields re-installed. Fan replaced on 14m aspirated shield.
- Operating normally

Radiometers:

- 2020-08-31: Solar tracker out of alignment, troubleshooting ongoing.