

ICECAPS Weekly Report

November 20 – November 26, 2017

Hannah James



A strong inversion on Thursday provided some spectacular fata morgana. -HJ

General:

- There was a planned power outage on 11-20 lasting from 17:02-17:03Z to switch station back onto the MicoTurbine generator from the SMG generators. However, an unplanned outage occurred the following morning, 11-21, from 07:01-07:09Z (switching to the emergency generator), and 07:17-07:18Z (switching to the SMG generator module). The KVM switch was restored, returning access to Dataman, MWR, and SODAR computers.

Significant Weather Observations:

- 11-20: Few cirrostratus in the distance, sky clear overhead. -50C, 16 kts. Strong fata morgana throughout the morning. Fzfg in the evening.
- 11-21: Few cirrostratus in the distance, sky clear overhead. -53C, 12 kts. Fzfg in the afternoon/evening.
- 11-22: Sky clear. -45C, 19 kts. Strong fata morgana in the morning.
- 11-23: Sky clear, mist. -50C, 16 kts. Strong fata morgana in the morning, especially at 12:45Z.
- 11-24: Sky clear overhead, blsn. -46C, 21 kts.
- 11-25: Ovc altostratus. -28C, 13 kts. Drsn, br, -sn in morning.
- 11-26: Sct stratus, bkn altocumulus. -28C, 5 kts. Br, -sn in the evening.

ICECAPS Data Management:

- Unknown exact times due to KVM switch failure for Nov 20 and 21.
- 11-20: Data transfer complete at approximately 13:00Z.
- 11-21: Data transfer complete at approximately 14:00Z.
- 11-22: Data transfer complete 10:39Z.
- 11-23: Data transfer complete 11:53Z.
- 11-24: Data transfer complete 12:07Z.
- 11-25: Data transfer complete 11:20Z.
- 11-26: Data transfer complete 11:47Z.

MWR:

- As of 10-28, 150-90 operating in V11_SCAN_HF.MBF. HATPRO remains on and heated until weather conditions allow it to come off the MSF roof.

SODAR:

- Operating normally.
- 11-26: 13:04-13:20Z SODAR transmitter off to remove snow from dishes.

POSS:

- 11-23: 14:22Z- old software restarted.
- Working with Peter at EC to run new and/or old software. POSS offline from time to time while troubleshooting.

MMCR:

- Operating normally.
- 11-22: Receiver Cal Running error, resumed normal operations 13:00Z.

CAPABL:

- Operating normally.
- 11-21: Insulation around inside of the window found knocked down and hanging from the periscope. Insulation was returned and secured. Laser was clearly misaligned, and with Robert's assistance via LogMeIn and Skype troubleshooting occurred throughout the day. Cleaned receiver corrector plate of insulation debris, inspected telescope and transmitter mirrors, inspected transmitter wave plate, checked the beam shape and power for any problems, and centered the beam with the periscope removed. No alignment was found, and fog rolled in corrupting further attempts.
- 11-22: Alignment continued. Fog was preventing previous evening's attempt. Alignment found, returned to normal operations around 20:55Z. Laser operating in ConfigureHardwareOpsLaser1 file.

MPL:

- Operating normally.
- 11-23: Afterpulse calibration performed 13:18-13:40Z. 30m, 30s 13:22-13:30Z. CopolBkdAvg: 0.000250, CopolBkdStd: 0.000178. 30m, 30s 13:31-13:39Z. CopolBkdAvg: 0.000244, CopolBkdStd: 0.000254.

VCEIL:

- Operating normally.

Hotplate:

- 11-20: Ran tests inside the MSF. No errors occurred and snow was registered when dropped on the plate. When temperatures warm up, it will be reinstalled outside.

IceCAM:

- Operating normally.

PAERI:

- Operating normally.

TSI:

- In the MSF for winter storage.

IcePIC:

- No images collected this week.

Radiosonde:

- Twice daily soundings.
- 11-26: Morning sonde reading >100% RH during prep, but did not shut down with the previously seen RH humidity failure messages. Launch was successful, and edited data was reflecting reasonable readings.

MASC:

- 11-20: With John on the phone, the MASC was inspected and tested. A break in the silicon sealant was found, which allowed small amounts of water into the instrument. Tests were completed inside, and the MASC was deemed suitable to return outside when weather allows.
- 11-22: Replaced desiccant, resealed outside with silicone caulking.