

ICECAPS Weekly Report

October 23 – October 29, 2017

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A gorgeous sunrise over the MSF on an unusually calm morning. -HJ

General:

- The new Telebyte was installed on the POSS, and daily checks have passed since. Peter at EC noted that data had, as a matter of fact, looked fine since the 22nd. With one instrument brought back online, we unfortunately lost another. With the high winds and drastic drop in temperatures towards the end of the week, the HATPRO MWR suffered both a serial cable failure and a failed K-band receiver. We are awaiting further recommendations from RPG, but most likely will be sending the radiometer back to Germany with the first available flight in 2018.

Significant Weather Observations:

- 10-23: Sct cirrostratus. -39C, 13 kts. 12:00Z- fogbow.
- 10-24: Sct altocumulus, bkn cirrus. -19C, 12 kts.
- 10-25: Ovc status. -23C, 17 kts.
- 10-26: Ovc stratus. -26C, 24 kts.
- 10-27: Ovc stratus. -18C, 20-40 kts. Bln.
- 10-28: Few cirrus. -43C, 5 kts, increasing throughout the day. 12:00Z- Fatamorgana.
- 10-29: Ovc stratus. -14C, 22 kts. Bln.

ICECAPS Data Management:

- 10-23: Data transfer complete 11:29Z.
- 10-24: Data transfer complete 12:06Z.
- 10-25: Data transfer complete 11:42Z.

- 10-26: Data transfer complete 12:05Z.
- 10-27: Data transfer complete 11:54Z.
- 10-28: Data transfer complete 11:44Z.
- 10-29: Data transfer complete 11:26Z.

MWR:

- As of 10-28, 159-90 operating in V11_SCAN_HF.MBF, HATPRO remains on and heated awaiting further instructions.
- 10-23: Frost accumulated on both MWR windows. Removed with a brush, photos stored on file.
- 10-27: Communication error found upon daily rounds (discovered the occurred 10-26 at approximately 18:00UTC). Unable to reconnect after multiple restarts. Through skyping with Erik, it was discovered that the serial cable is most likely faulty. After a number of hours of diagnostic work, we decided to resume the following day.
- 10-28: Communication error persisted through diagnostic work with Dave. After attempting to connect Receiver 1, voltages remained at either a constant zero or sporadic jumps, while the internal temperatures oscillated by ~10 degrees C. The K-band receiver was diagnosed dead. The serial cable and receiver are two separate fatalities. It is expected that the high winds are the cause of the serial cable (which we do not have a replacement for), and the drastic drop in temperature (~20C in 24 hours) for the receiver.
- 10-29: 17:08Z- Last measurement made before communication error discovered Monday morning. Restarted the software, measurements resumed 10-30 at 12:38Z.

SODAR:

- Operating normally.
- 10-24: 17:20-17:29Z- Cleaned SODAR dishes.

POSS:

- 08-14 to 10-24: The log files show 'posaccmsod' and truncated messages.
- 10-25: Replaced Telebyte. POSS shut down 16:18-17:05Z. No truncated messages or unacceptable errors found afterwards. Peter at EC reported that the data started looking good on 10-22, before replacing the Telebyte. The reason for this is unknown.

MMCR:

- Operating normally.
- 10-23: Error 7, Receiver Cal running error found. 14:00Z- back to normal operations.

CAPABL:

- Operating normally.

MPL:

- Operating normally.

VCEIL:

- Operating normally.

Hotplate:

- Operating normally.

IceCAM:

- Operating normally.

PAERI:

- Operating normally.

TSI:

- In the MSF for winter storage.

IcePIC:

- Images not captured.

Radiosonde:

- Twice daily soundings.
- 10-23: Morning radiosonde launched a few minutes late due to a failed humidity sensor.

MASC:

- Operating normally.
- 10-27: MASC reports that it is "Waiting for status" in data acquisition program, number of dropped images increased from 70 to 100 overnight.
- John reported that the high temperatures are a result of the MASC software- it does not report negative values, therefore will circle back to the highest possible values: i.e. -1C is reported as 255C, -2C is 254C.