

ICECAPS Weekly Report

April 24 – April 30, 2017

Hannah James



The HATPRO running measurements in the MSF. Cables galore! -HJ

General:

On Monday, April 24, 2017 there was a very brief unexpected power outage at 17:31Z, lasting only a few seconds. Later that evening there were two planned power outages for emergency generator work from 21:17-21:19Z and 21:59-22:00Z. Wednesday, April 26 there were two planned power outages lasting from 16:02-16:04Z and 16:42-16:43Z. After a number of weather delays, the HATPRO was able to come inside for diagnostics on Friday, April 28. Flight Period 1 continued with C-130 arrivals throughout the week.

Significant Weather Observations:

- 04-24: Drsn, IC. Sct cirrus, becoming ovc stratus in afternoon. -25C, 19 kts. 12:00Z- halo, lower tangent arch, circumzenithal arc.
- 04-25: Blns, -sn. Ovc stratus. -18C, 20 kts.
- 04-26: Blns. Bkn stratocumulus, bkn altocumulus. MPL picking up verga-looking phenomena at 9000 feet, but not visible through low clouds. -18C, 15 kts.
- 04-27: Blns, sn. VV002. -15C, 27kts.
- 04-28: Drsn, IC, br. Few altostratus. -29C, 12 kts. Heavy IC, halo, upper and lower tangent arc, circumzenithal arc through most of the morning.
- 04-29: Blns, sn. Ovc stratus. -21C, 15 kts in the morning climbing to 25 kts mid-morning through the afternoon. Halo and parhelia throughout the day.
- 04-30: Ic, vcfzfg. Few stratus, few cirrostratus. -27C, 9 kts.

ICECAPS Data Management:

- 04-24: Dataman computer screen remains totally blank. Looking at the InSite data transfer webpage, it appears Dataman transfers did not occur overnight. Performed a hard reboot at 17:27Z, at 17:35Z Dataman was back online. Matt Shupe started manual push of data.
- 04-25: Data transfer complete 05:24Z.
- 04-26: Data transfer complete 06:07Z.
- 04-27: Data transfer complete 05:57Z.
- 04-28: Data transfer complete 04:47Z. MMCR mount down overnight. Remounted drives at 12:22Z.
- 04-29: Data transfer complete 05:39Z.
- 04-30: Data transfer complete 05:51Z.

MWR:

- 150-90 operating normally, HATPRO inside for repairs.
- 04-24: 150-90 liquid nitrogen calibration performed. 16:45Z- stopped measurements. 17:05-17:08Z- calibration performed. 17:17Z- measurements resumed.
- 04-27: Error message stating “Communication problem with radiometer detected!” kept popping up. Radiometer time clock reading 00:19Z, data not updating. Restarted the software and power cycled the radiometer. Measurements resumed at 14:26Z.
- 04-28: HATPRO brought into the MSF.
- 04-30: Diagnostics done on HATPRO. 14:09Z- Measurements stopped on 150-90. Spare comms cable did not successfully connect to HATPRO, it is thought that this was a flaky cable in the past. Next time something is sent to RPG, this will go with it for testing. Due to the unusable comms cable, the fiber optics cable was hooked up to communicate with the HATPRO. At 17:05Z successful communications were made with the HATPRO. The mirror was manually set to 90 degrees, 0 degrees, and -90 degrees. No vibrations were heard or felt, it was reported via the DOS screen hooked up to the instrument that the mirror was successfully reaching its position. At 17:20 the HATPRO was powered down to take the lid off for a mirror inspection. There was a fair amount of condensation on the interior of the lid, especially around the window. The rubber outside of the belts are both cracked in some locations, but still are moving the mirror successfully on command. At 18:31Z the HATPRO was restarted and visual confirmation was made that the motor assembly does indeed work. The HATPRO lid was replaced for protection, and at 19:13Z a regular batch file for both the HATPRO and 150-90 began. The monitor hooked up to the HATPRO confirms that the mirror is properly moving and performing a sky tilt as expected. Measurements will run inside overnight, and we will continue with troubleshooting next week. Liquid nitrogen will remain on station until the next flight period.

SODAR:

- Operating normally.

POSS:

- Operating normally.
- 04-24: Brought online at 17:39Z after Dataman reboot.

MMCR:

- Pitch -0.10, roll -0.22 as of 04-30.
- 04-24: Error log reporting “NetCDF_Mom - Could not read calibration table NetCDF file” and “Level 2 - NetCDF_Mom - Data may be incorrect” on all error logs since yesterday’s 12:30 calibration. All 12:30 calibrations tests pass. Errors remained through 2017-04-27.
- 04-27: Rebooted radar to clear error messages. 12:32Z- first reboot started. Fault message occurred, rebooted again at 12:47Z. Radar collecting data and passed all daily checks at 13:00Z.
- 04-28: MMCR mount down overnight, no files transferred from previous day.

CAPABL:

- Operating normally.

MPL:

- Operating normally.
- 04-27: Monthly afterpulse calibration performed 16:35-16:56Z. 16:36-16:44Z: 30m, 30sec calibration. CopolBkdAvg: 0.00289, CopolBkdStd: 0.00200. 16:45-16:54Z: 15m, 30sec calibration. CopolBkdAvg: 0.00226, CopolBkdStd: 0.00245.

VCEIL:

- Operating normally.

Hotplate:

- Arrived on station 04-29-2017. Will set up early next week.

IceCAM:

- Operating normally.
- 04-24: Brought online at 17:39Z after Dataman reboot.

PAERI:

- Operating normally.

TSI:

- Stored in MSF for winter.

IcePIC:

- No images captured this week.

Radiosonde:

- Twice daily soundings.
- Ongoing troubleshooting dealing with *.mxw and *.spf files not being grabbed by Dataman. For now, every other day I will manually change the permissions.

MASC:

- Offsite for repairs since 2016-05-03.