**ICECAPS-ACE Weekly Report**

September 28th – October 4th, 2020

Heather Guy



*Colorful aurorae above the SMG on 2020-09-27*

*Photo: Heather Guy*

**General Notes:**

We saw in October with a relatively quiet week science-wise, but plenty of drifting and blowing snow to keep us busy. This week I drained, dismantled and packed the remaining INP equipment in the MSF. I also replaced the air filter on the radiosonde base station enclosure and helped Jasper with continued (but unfortunately unsuccessful) troubleshooting of the solar tracker alignment.

**General Weather Observations:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Date** | **Time (Z)** | **Wind** | **Weather** | **Visibility** | **Sky** | **Temp (C)** | **Notes** |
| 09-28 | 12 | 12 kts at 064 | FZFG | 1000 | VV001 | -39 | Double fog bow |
| 09-29 | 12 | 15 kts at 072 | DRSN FZFG | 800 | VV016 | -32 |  |
| 09-30 | 12 | 16 kts at 111 | BLSN | 800 | FEW | -34 |  |
| 10-01 | 12 | 19 kts at 113 | BLSN | 800 | VV025 | -26 | High winds & drifting overnight |
| 10-02 | 12 | 13 kts at 146 | SN | 3200 | OVC025 | -20 | SN and cloud clears ~1230z |
| 10-03 | 12 | 8 kts at 166 | BR | 1600 | FEW | -38 | SN pm. |
| 10-04 | 12 | 16 kts at 113 | BLSN | 1600 | SCT | -23 |  |

**Significant Weather Observations:**

* 2020-09-28 1030-1300Z: Double fog bow
* 2020-09-29 0930-1045Z: Parahelia
* 2020-09-29 1045-2000Z: 22 degree halo
* 2020-09-30 1045-1700Z: lower half of halo associated with BLSN.
* 2020-10-01 0930-1200Z: Parahelia and upper tangent arc.
* 2020-10-03 1030-1200Z: fog bow
* 2020-10-04 1130-1245Z: Parahelia
* Note: Sig Wx photos are not being transferred to Boulder.

**MSF**

* Operating normally

**ICECAPS-ACE Data Management:**

* 09-28: Data transfer completed at 0439Z.
* 09-29: Data transfer completed at 0446Z.
* 09-30: Data transfer completed at 0440Z.
* 10-01: Data transfer completed at 0440Z.
* 10-02: Data transfer completed at 0442Z.
* 10-03: Data transfer completed at 0437Z.
* 10-04: Data transfer completed at 0434Z.
* Note: df command still slow.

**TSI:**

* Offline for the winter season.

**Radiosonde:**

* 2020-10-01 1130Z: Enclosure air filter replaced.
* 2020-10-01: Premature sounding termination (6,861 magl), reason for termination: ‘Weak or failing signal’.
* Once daily launches.
* See chart below for temperatures inside and outside the radiosonde cabinet over the last week:

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**MWR:**

* 2020-09-30 1216Z: Cleared error ‘Slave elevation mirror does not respond’
* Operating normally

**SODAR:**

* 2020-09-28 1308-1324Z: Cleaned and leveled the SODAR dishes.
* Operating normally.

**POSS:**

* Operating normally.

**MASC:**

* Offline for winter season.

**MMCR:**

* Operating normally.

**CAPABL:**

* Note: CAPABL computer time is consistently 5-10 s different to GPS time despite daily re-synching.
* Operating normally.

**MPL:**

* Operating normally.

**CEILOMETER:**

* Operating normally.

**PAERI:**

* Operating normally.

**IceCAM:**

* Operating normally.

**IcePIC:**

* No IcePICS this week ☹

**CPC:**

* Offsite for repairs.

**MSF - OPC:**

* 2020-10-02 1230Z: Offline to defrost after suspiciously low counts.
* 2020-10-03 1724Z: Back online after cleaning and drying. No data improvement.

**TAWO - OPC:**

* Operating normally.

**SKYOPC:**

* Operating normally.

**Fluxtower instrument suite:**

* Operating normally

**Radiometers:**

* Solar tracker misalignment troubleshooting ongoing, otherwise operating normally.