ICECAPS-ACE Weekly Report

Week 28, July 8 -- July 14, 2019
Jonathon Miller / Heather Guy

JSEP Visitors Arriving at Summit Camp in FP4

General Notes: Flight period 4 began on Thursday 11th, bringing Heather Guy to begin turnover tasking with Jonathon. Flights on 11th and 13th occurred during North winds, possibly impacting aerosol measurements in the clean air sector. The TAWO building has been successfully raised 8.5 feet, affecting the INP aerosol sampler inlet height and the TAWO OPC inlet height. Jonathon will officially hand over ICECAP technician duties to Heather on Tuesday 16th July, the last day of flight period 4.

General Weather Observations (12:00 UTC)

Date	Temp (°C)	Wind (kt / dir)	Weather	Visibility	Sky	Notes
July 8	-7	13 / 062		9999	BKN010	
July 9	-6	12 / 079		4800	OVC017	
July 10	-6	9 / 086		9999	OVC032	
July 11	-6	5 / 017		9999	BKN045	
July 12	-12	4 / 279		9999	SCT016	
July 13	-13	0 / 0		9999	FEW	
July 14	-15	4 / 191		9999	FEW210	

ICECAPS-ACE Data Management Transfer

Date	Transfer Complete (UTC)
July 8	05:03:19
July 9	05:00:54
July 10	05:02:29
July 11	05:24:27
July 12	05:05:53
July 13	05:05:18
July 14	05:06:54

Mobile Science Facility (MSF)

July 11:

- Electrical inspection was conducted at MSF to address some possible grounding issues that may cause static discharge from people working at MSF.
- It is not known where reports of static electricity discharges came from but no static discharges were observed during the summer months at MSF.

Data Manager Computer (Dataman)

July 8-14:

- Permission errors are preventing the Dataman computer from properly mounting the MASC laptop data folder thus preventing the nightly MASC data transfer to Boulder. This will be addressed by Matt when he returns from travel.

Microwave Radiometers (MWR)

- Operating normally.

SOnic Detection And Ranging (SODAR)

July 13:

- The sodar was taken offline in order to clean and level the dishes.

Precipitation Occurrence Sensor System (POSS)

- Operating normally.

Millimeter Cloud Radar (MMCR)

July 14:

- The "error warning indicator" on the Lap-XM screen is flashing red with "errors / see log". The errors are all 'NetCDF' errors. When they're cleared the error warning indicator returns to green. However, after a couple of minutes the errors return.
- There is also a flashing red light with a hand written label "added loss" on the pulse controller next to the toggle switches (see attached image).
- There were no LabView errors observed on the radar-dm computer.

Cloud Aerosol Polarization and Backscatter Lidar (CAPABL)

- Operating normally.

Micro-Pulse Lidar (MPL)

July 12:

- The computer time will not successfully sync to the GPS time server at MSF. Multiple attempts to manually sync with the time server failed.
- The computer time was updated by manually entering the current time.

July 14:

- Monthly MPL calibration was performed.

Laser Ceilometer

- Operating normally.

IceCAM

- Operating normally

Polar Atmospheric Emitted Radiance Interferometer (PAERI)

- The ABBTemp flag was intermittently red and yellow throughout the week possible caused by low/north winds and warm temperatures.

Total Sky Imager (TSI)

- System is currently offline.
- We are exploring the option of getting updated software to install on a newer computer system.

Ice Particle Image Camera (ICEPic)

- No images.

Radiosonde

- Launched twice daily.

Multi-Angle Snowflake Camera (MASC)

July 14:

- It was discovered that the touchpad on the mac/windows laptop is no longer responsive.
- John Rausch stopped the MASC software and rebooted the computer, this fixed the problem.

MSF - Optical Particle Counter (OPC)

- Operating normally

TAWO - Optical Particle Counter (OPC)

July 12-13th

- TAWO building lift raised inlet 8.5 feet.

Sky Optical Particle Counter (SKYOPC)

- Operating normally

Condensation Particle Counter (CPC)

July 14th:

- CPC found powered down. It looks like the installation of the 3rd INP laptop dislodged the CPC power plug on July 13th. CPC continued collecting data until 0100z on the 14th before the internal battery died. The plug was reseated and the CPC was powered back up, data collection restarted at 1313Z.

Compact Lightweight Aerosol Spectrometer Probe (CLASP)

- Operating normally

Fluxtower Instrument Suite

- Operating normally

Ice Nucleating Particles (INP) Freezing Assay

Weekly filter runs:

Magazine changed	Filter 1 start time/date	Filter 2 start time/date	Filter 3 start time/date
YYMMDD	YYMMDD hh:mm	YYMMDD hh:mm	YYMMDD hh:mm
190704	190704 16:00	190707 00:00	190709 08:00
190713	190713 15:43	190715 23:43	190718 07:43

July 12th:

- TAWO building lift raised inlet 8.5 feet.

July 13th:

- Sample flow volume set to 38.33 L/min as per Bethany's request.
- Freezing assay completed for filter 3.

July 14th:

- Freezing assay completed for filters 2 and 1. Data transferred to Boulder.

Aerosol Vertical Profiler (AVP)

July 12:

- During drone flight preparations, all attempts to SSH or ping the raspberry pi were unsuccessful. The raspberry pi was shutdown and restarted several times with the same results.
- A monitor was attached to the raspberry pi and it was determined that it was booting up with an IP address different from what is stated in the SOP. The current IP on the raspberry pi is 192.168.0.198.
- It is possible that the raspberry pi was allocated a different IP address from the wireless access point. It is recommended that a static IP be reserved for the raspberry pi on the stations network.

July 13:

- Successful AVP completed at 1634z.