

ICECAPS Weekly Report

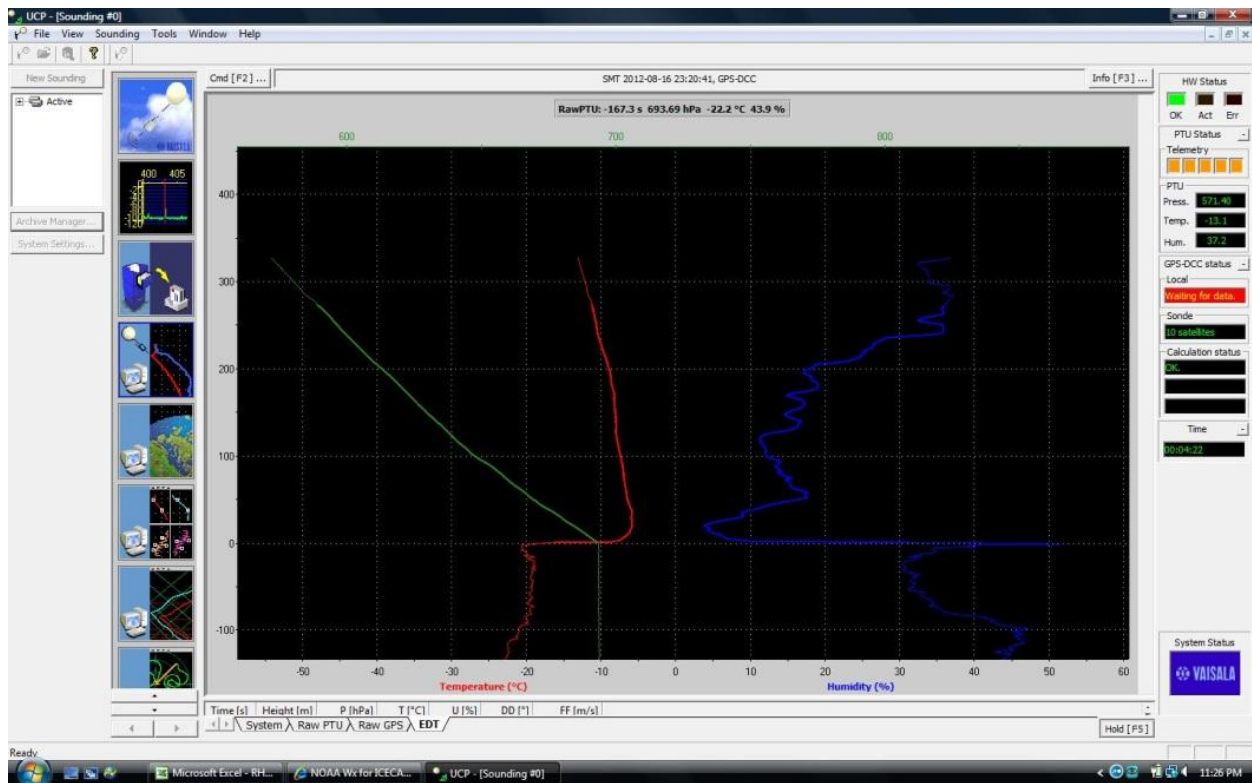
August 15 – 21, 2012

Patrick Wright – Phase I Tech

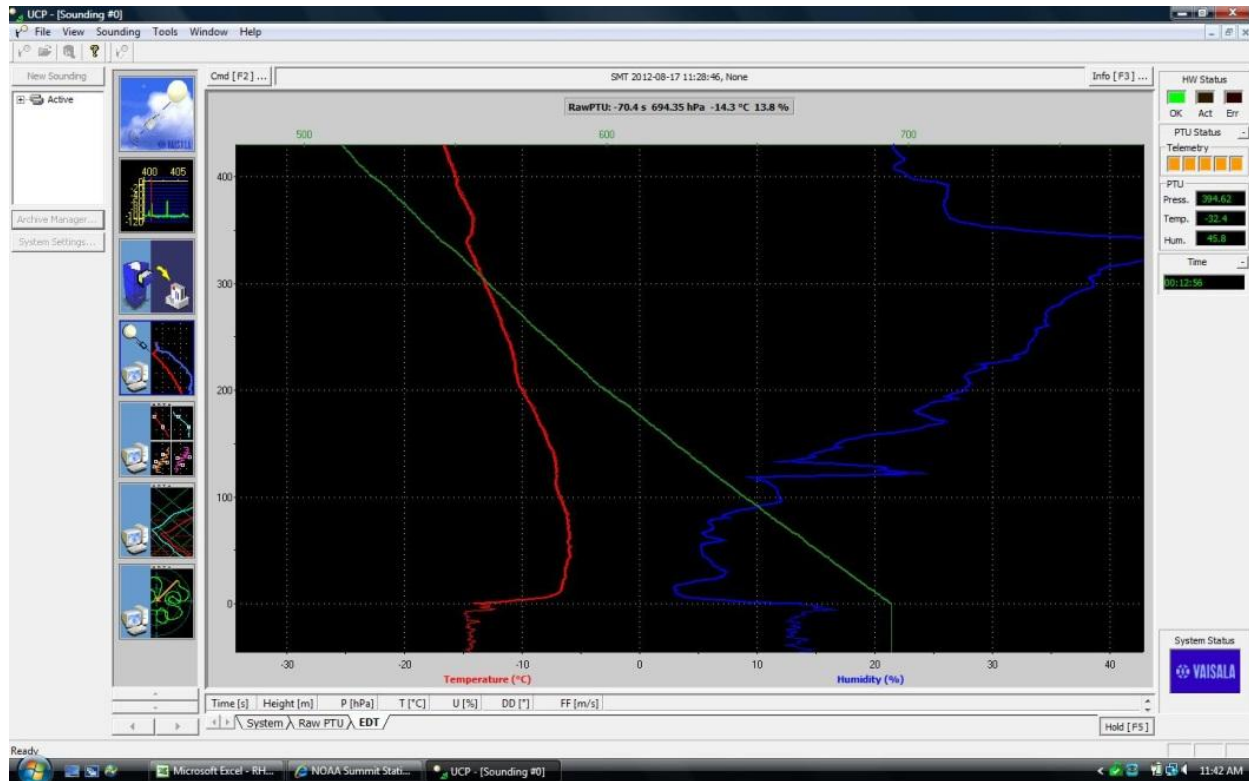
Interesting weather events:

- Almost totally clear weather all week, ending with super juicy cloud cover moving in on 08/21.
- **Extremely low RH and strong surface temperature inversions** beginning 08/16, and continuing through 08/19 AM launch. NOAA RH at 10-15% throughout the evening of 08/16 and into 08/17, w/values as low as 7%! 15-20°C temperature inversions within 10-20 meters of surface.
- At 1600Z on 08/16 David Noone reports RH dropping from 90% to 20% in 5 minutes at 10-m on Swiss Tower, and 10°C inversion between 2 and 10 meters. The morning of 08/18, David reports over 20°C inversion from 2 to 10 meters. Very little turbulence. Low isotope values. David suggests slowly aged air that was dried by in situ condensation (stratiform cloud with ice crystals falling out slowly), and very low in large and medium size aerosols.
- Bergin reports a large aerosol load arriving simultaneously with the RH changes on the 16th. High SSA, small size distribution. Likely sulfates or SOA particles (SSA argues against BC and forest fires).
- Low to normal ozone values (tandem launch on 08/17) argue against vertical mixing. 10-day back trajectories on 08/16 and 08/17 show air masses originating over northern Canada and far north arctic areas.

08/16, PM launch



08/17, AM launch



General Items

- Map of UPS/non-UPS circuits in MSF (attached).
- Rec'd six MWR fans, and 2 PAERI fans.

Dataman Account:

- Drive ECC errors (discussed w/Shupe).
- "ArchiveData.bash" reporting "no space left on device" (Issue with USB drive). Shupe has fixed problem, will likely recur in ~2 months.

PAERI:

- Yellow flag: "HBB Max Temp Diff" on and off throughout week.

MPL:

- After troubleshooting w/Richard Coulter, new MPL #107 collecting data as of 1227 UTC on 20120818. Currently running with afterpulse cal, but without overlap or deadtime cal files. See e-mail "MPL Update" for details. MPL #101 and all components are in RETRO.

CAPABL:

- At 08/21 daily check (1230Z), CAPABL computer was logged out, LabView not running. Went through startup sequence as per manual. Had to power cycle flipper controller to resume measurements.

MMCR:

- Failure to restart after daily cal on 08/20. Initiated first reboot at 1519Z. Multiple reboot attempts failed to bring system back up. After power cycling router, and attempting reboot again, manually putting the TWTA into operate initiated measurements. Back up at 1744Z.

MWR:

- LN2 cal: one cal on the 50/190, three cals (including flops) on the HATPRO. See MWR log for times and detailed notes.

ASIA-A:

- Worked with Pierre Martin-Cocher throughout week (see attached photos of new installations):
 - One LN2 calibration.
 - Installed additional foam insulation on radiometer.
 - Installed webcam on railing, networked through powered ethernet hub on top of rack. Webcam locally accessible at <http://192.168.1.184/>
 - Installed IBootBar for all ASIAA equipment, allowing remote reboots. (note: small heat trace and webcam are only components not on the IBootBar)

SODAR:

- Normal. (considerable machinery operation noise this week)

POSS:

- Normal.

VCEIL:

- Normal.

IceCAM:

- Normal.

IcePIC:

- No precip. this week.

Radiosonde:

- All sonde equipment inventoried (e-mail to Von)
- Late launch on 08/20 due to flight ops. AM launch on 08/21 and PM launch on 08/19 launched 15 min. late due to battery/sonde issues. 08/15 sonde closed out late.

TSI:

- Normal.

Plans:

- Edit MPL daily check documentation for new software/instrument.
- Replace broken powerline support bamboo.