

Daily status aug 10

AHATS status 8/10/08

Staff: Militzer, Oncley, Nguyen, Verstraete with ISS.

Temps: 94F/57F yesterday

Activity highlights:

- now in array4!!!

For more details, see the ahats logbook at <https://wiki.ucar.edu/display/ahatslogbook> ...but wiki.ucar.edu has been down this weekend...

Good wind direction:

array#3 (jul 29 12:30 - aug 8 06:00) had 66 hours (13 unstable, 53 stable).

array#4 (aug 9 18:00 - present) has 8 hours (0 unstable, 8 stable).

Local data storage: (we downloaded everything on 30 July)

upwind: [DOWN -- we'll reset today \(WiFi data okay\)](#)

downwind1:/dev/sda1 57685532 7813940 49871592 14% /var/tmp/usbdisk

downwind2:/dev/sda1 57685532 7655580 50029952 13% /var/tmp/usbdisk

profile:/dev/sda1 57685532 6183912 51501620 11% /var/tmp/usbdisk

pressure1:/dev/sda1 3940812 1666816 2273996 42% /var/tmp/usbdisk

pressure2:/dev/sda1 3897204 1397804 2499400 36% /var/tmp/usbdisk

aster:/dev/sdb1 721075720 447126872 273948848 63% /media/isff2

isff:/dev/sdb1 1922890480 627207052 1198006224 35% /media/isff15

Pressure:

(+/- = ~1 std deviation among variables at the same height)

11.b now measuring p with the 202BG connected between the Bedard port and CHATS reference. P.0m [poor name](#) now is the portable Paroscientific standard with reasonable resolution, but low sampling rate.

p: ok, +/- 0.03 mb [plot scale too large to tell](#)

p'p': ok, +/- 0.0001 mb^2 [small but perhaps okay -- only stable data to look at](#)

w'p': ok, +/- 0.001 m/s mb

t: ok, 1 degC

Pref: ok, reconnected to volume at start of this config.

P: ok

Profile: [.select.p](#)

Was kept on during reconfig. Heights of sensors are the same.

T: ok

RH: sensor that is at 5.8m is up to 2% off. Didn't change throughout array #3 period, now is not important in array #4.

h2o: normal, 2 g/m^3 offset from dat("Q"), except in afternoon.

w'h2o': ok, 0.025 m/s g/m^3 at midday

co2: ok, 14-17 mmol/m^3 (some nights have large values, some don't)

w'co2': ok, -0.01 m/s mmol/m^3 at midday

diag: ok? spikes in 4.8m.

samples.sonic: ok

spd: ok?, 8m now mostly higher than 7m, but could mean 8m is too high (after swap)

We proved that the WiFi antenna was not bothering it...

dir: ok

w: ok

tc: ok, still strange 7m/8m ordering.

w'w': ok

u*: ok, some imaginary values with light winds

sigma_w/u*:

w'tc': ok (lowest near the ground?)

tc'tc': ok

Upwind: [.select.u](#)

diag: ok, 6u spikes
samples.sonic: ok
spd: ok, +/- 20 cm/s
dir: ok, obviously need new angles
w: ok, +/- 5 cm/s, 11u differs a bit
tc: ok, +/- 0.2 deg, biases somewhat larger
w'w': ok, +/- 0.005 m²/s² (30 min avg for second moments)
u*: ok, +/- 2 cm/s, some imaginary
sigma_w/u*:
w'tc': ok, +/- 0.01 m/s degC
tc'tc': ok, +/- 0.05 degC²

Downwind Lower: [,select.b](#)

Relatively large differences with east winds.

diag: ok
samples.sonic: ok
spd: ok, +/- 20 cm/s, 13b outlier early this morning
dir: ok, need new boom angles
w: ok, +/- 5 cm/s, pitched up a bit (we tightened it a bit too much)
tc: ok, +/- 0.2 deg, biases up to +/-0.8
w'w': ok, +/- 0.01 m²/s² (30 min avg for second moments)
u*: ok, +/- 2 cm/s, some imaginary
sigma_w/u*:
w'tc': ok, +/- 0.01 m/s degC
tc'tc': ok, +/- 0.05 degC²

Downwind Upper: [,select.t](#)

diag: ok
samples.sonic: ok
spd: ok, +/- 10 cm/s, 11t/10t differences (like 13b/12b above)
dir: ok, +/- 2 deg, need boom angles
w: ok, +/- 5 cm/s, a bit pitched up as well
tc: ok, +/- 0.2 degC, offsets up to 0.6 degC
w'w': ok, +/- 0.01 m²/s² (30 min avg for second moments)
u*: ok, +/- 2 cm/s, som imaginary
sigma_w/u*:
w'tc': ok, +/- 0.01 m/s degC
tc'tc': ok, +/- 0.05 degC²
