

Daily status 12 aug

AHATS status 8/12/08

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

Temps: 99F/59F yesterday

Activity highlights:

- now in array4.
- See profile note on 11th: diamond board problem. no outages last night, crontab reset working.
- Logbook Wiki and NCAR Web server finally up this morning.

<https://wiki.ucar.edu/display/ahatslogbook>
...but wiki.ucar.edu has been down this weekend...

Good wind direction:
array#4 (aug 9 18:00 - present) has 11.92 hours (.42 unstable, 11.5 stable).
(Darn, winds have not cooperated for a couple of days!)

Local data storage:

upwind:/dev/sda1 57685532 2605580 55079952 5% /var/tmp/usbdisk
downwind1:/dev/sda1 57685532 10661244 47024288 18% /var/tmp/usbdisk
downwind2:/dev/sda1 57685532 11091504 46594028 19% /var/tmp/usbdisk
profile:/dev/sda1 57685532 7848016 49837516 14% /var/tmp/usbdisk
pressure1:/dev/sda1 3940812 631080 3309732 16% /var/tmp/usbdisk
pressure2:/dev/sda1 3940812 635460 3305352 16% /var/tmp/usbdisk

aster:/dev/sdb1 721075720 465517532 255558188 65% /media/isff2
isff: /dev/sdb1 1922890480 645615008 1179598268 36% /media/isff15

Pressure:

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

P.bedard had a pinched hose overnight so data is bogus until fixed today @~10pdt.

'p.ref' is measuring AHATS ref p with the 202BG connected between the AHATS and CHATS references.
P.bedard now is the portable Paroscientific standard with reasonable resolution, but low sampling rate connected to the Bedard pressure port now installed on boom 13b.

p: ok, +/- 0.03 mb [plot scale too large to tell](#)
p'p': ok?, +/- 0.0005 mb^2 [small but perhaps okay](#) some variance 'spike' in 5b in 20z
w'p': ok, +/- 0.001 m/s mb in day
t: ok, 1 degC,
Pref: ok, reconnected to volume at start of this config.
P: ok

Profile: [.select.p](#)

[Need to swap new 8P board with an old version 8M, but none available.](#)

Heights of sensors are the same as array3.

T: ok. Intended to move trh sensors, but tower/collars didn't work well for exact placement
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, 14-18 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
samples.sonic: ok
spd: ok. Swapped sonic at 8m yesterday, corrected abnormal looking profile
dir: ok
w: ok
tc: ok
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, 8u spikes and 6u more
samples.sonic: ok?
spd: ok, +/- 20 cm/s
dir: ok, obviously need new angles
w: ok, +20/-10 cm/s, maybe tilted
tc: ok, +/- 0.2-4 deg, biases somewhat larger
w'w': ok, +/- 0.005 m²/s², 3u highest (30 min avg for second moments)
u*: ok, +/- 5 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, much larger variance yesterday with winds off dir
dir: ok, need new boom angles
w: ok, +/- 10 cm/s, pitched up a bit (we tightened it a bit too much)
tc: ok, +/- 0.3 deg, biases up to +/-0.6
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, spikes around 18, 23PDT last night
samples.sonic: ok
spd: ok, +/- 40 cm/s, higher in 3t yesterday up to 1.1-5m, and in general higher
dir: ok, +/- 2 deg, need boom angles
w: ok, +/- 10 cm/s
tc: ok, +/- 0.4 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
