

# Daily status Aug13

AHATS status 8/13/08

Staff: Chenning, Militzer, Partial-Onclay, Nguyen, Verstraete with ISS.

Temps: 100F/60F yesterday

Activity highlights:

- now in array4.
- See profile note on 11th: diamond board problem, but crontab reset working.
- SteveO is bringing a partial set of the data (essentially all of array3 and up to today) home with his pc. Along with the disk SteveC returned, this gives a 3rd copy of the data through today.
- <https://wiki.ucar.edu/display/ahatslogbook>

Good wind direction:

array#4 (aug 9 18:00 - present) has 16.8 hours (2 unstable, 14.8 stable).

Local data storage:

-----  
upwind:/dev/sda1 57685532 3886424 53799108 7% /var/tmp/usbdisk  
downwind1:/dev/sda1 57685532 12082788 45602744 21% /var/tmp/usbdisk  
downwind2:/dev/sda1 57685532 12797440 44888092 22% /var/tmp/usbdisk  
profile:/dev/sda1 57685532 8793928 48891604 15% /var/tmp/usbdisk  
pressure1:/dev/sda1 3940812 927192 3013620 24% /var/tmp/usbdisk  
pressure2:/dev/sda1 3940812 931580 3009232 24% /var/tmp/usbdisk

aster:/dev/sdb1 721075720 471463780 249611940 66% /media/isff2  
isff:/dev/sdb1 1922890480 651612524 1173600752 36% /media/isff15

Pressure:

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

'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, overall spread between sensors ~.15  
p'p': ok?, +/- 0.0004 mb^2 max in daytime, <.0001 at night  
w'p': ok, +/- 0.0015 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 still up to 2% off esp at night.

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, 14-20 mmol/m^3  
w'co2': ok, <-0.01 m/s mmo/m^3 at midday

Sonics:

Profile

-----  
diag: ok  
samples.sonic: ok  
spd: ok.  
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, 6u noticeable spiking in daytime, up to .06, ok at night  
samples.sonic: ok?  
spd: ok, +/- 20 cm/s, 3u,4u seem highest in day, they're best exposed to the NE in 'bad' cond\ntions.  
dir: ok, obviously need new angles  
w: ok, +20/-0 cm/s, appears tilted  
tc: ok, +/- 0.2-6 deg, biases somewhat larger, 3u,4u again highest  
w'w': ok, +/- 0.005 m<sup>2</sup>/s<sup>2</sup>, 3u highest (30 min avg for second moments)  
u\*: ok, +/- 10 cm/s, some imaginary  
sigma\_w/u\*:  
w'tc': ok, +/- 0.01 m/s degC  
tc'tc': ok, +/- 0.05 degC<sup>2</sup>

Downwind Lower [,select.b]

-----  
Relatively large differences with east winds.

diag: ok, 2b spiking in daytime some, upto .05 occassionally (Birds, spiders?)  
samples.sonic: ok  
spd: ok, +/- 5 cm/s, with 1b upto to 1m higher, and 2b next in daytime with NEearly winds  
dir: ok, new boom angles improved things at ~19z last night, but 1b, 10b still appear out.  
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 m<sup>2</sup>/s<sup>2</sup> (30 min avg for second moments)  
u\*: ok, +/- .1 m/s, some imaginary  
sigma\_w/u\*:  
w'tc': ok, +/- 0.01 m/s degC  
tc'tc': ok, +/- 0.05 degC<sup>2</sup>

Downwind Upper [,select.t]

-----  
diag: ok, misc brief spikes, more likely birds than the notes above  
samples.sonic: ok  
spd: ok, +/- 50 cm/s, 3t much higher up to 1.1-5m during daytime (NE winds)  
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, up to +.15-0.2 m<sup>2</sup>/s<sup>2</sup> in day (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 degC<sup>2</sup>  
-----