

Daily status, July 3

AHATS daily status 7/03/08

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Summary: Gordon is working on the software to obtain calibrated fast pressure data. An initial look at the frequency data suggests that the data from the pressure sensor is too noisy. We are working on cleaning up the signal.

For more details, see the ahats logbook at <https://wiki.ucar.edu/display/ahatslogbook>

Good wind direction: For the period 7/1 13:00 through 7/3 13:00, we have 28.33 hours of data periods of length 20 minutes or longer with wind directions from 195-355 degrees. This includes 8 periods of length greater than one hour and equates to good periods 59% of the time. Sorted by stability, there are 14.5 hours of stable stratification ($\langle w'tc' \rangle < 0$) and 13.75 hours of unstable stratification.

Profiles:

spd: ok
dir: ok
w: ok
tc: ok
sigma_w/u*: ok (1.3 at night)
u*: ok
w'tc': ok
diag: ok
samples.sonic: ok
T: ok
RH: 4m may be low by less than 1% RH
P: okay

(+/- = ~1 std deviation)
Upwind (hts=3.5):

spd: ok, +/- 15 cm/s
dir: ok, +/- 5 deg
w: ok, +/- 5 cm/s
tc: ok, +/- 0.2 deg
w'w': ok, +/- 0.01 m²/s² (30 min avg for second moments)
u*: ok, +/- 0.04 m/s
sigma_w/u*: ok (1.3 at night)
tc'tc': ok, +/- 0.06 degC²
w'tc': ok, +/- 0.015 m/s degC
diag: ok
samples.sonic: ok

Lower (hts=3):

spd: ok, +/- 20 cm/s
dir: ok, +/- 5 deg
w: ok, +/- 6 cm/s
tc: ok, +/- 0.25 deg
w'w': ok, +/- 0.01 m²/s² (30 min avg for second moments)
u*: ok, +/- 0.04 m/s
sigma_w/u*: ok (1.3 at night)
tc'tc': ok, +/- 0.1 degC²
w'tc': ok, +/- 0.02 m/s degC
diag: ok
samples.sonic: ok

Upper (hts=4):

spd: ok, +/- 16 cm/s
dir: ok, +/- 5 deg; 6t is about 6.5 degrees off from profile sonic
w: ok, +/- 5 cm/s
tc: ok, +/- 0.25 deg
w'w': ok, +/- 0.01 m²/s² (30 min avg for second moments)
u*: ok, +/- 0.04 m/s
sigma_w/u*: ok (1.3 at night)
tc'tc': ok, +/- 0.1 degC²
u*: ok, +/- 0.04 m/s
w'tc': ok, +/- 0.02 m/s degC
diag: ok
samples.sonic: ok