# Daily status, July 12

AHATS daily status 7/12/08

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Summary: Max temperature yesterday at z=1.5m, 100 degF.

Fast pressure has been working since 12:00 7/11...start of good operations.

I have inventoried the HATS data to estimate how many hours of good wind direction are required to obtain a comparable amount of good data for AHATS. HATS had 4.2 - 7.4 hours of analyzable data per configuration for a total of 22 hours. HATS has 175 hours of periods at least 25 minutes long with wind directions within +/- 30 deg of normal to the array. Thus we would like to have 40-45 hours of good wind directions prior to changing from one configuration to the other. If we get good wind directions 30% of the time, this will require 6 days per configuration. Starting July 11 at 12:00, we have 29.75 days prior to tear-down on the morning of August 10, minus 3.5 days for reconfigurations or 26.25 days of data collection.

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

Good wind direction: From July 11, 12:00, until July 12, 12:00, we have had 9.75 hours or 40.6% good wind directions with continuous periods of at least 25 minutes. This includes 6.75 hours stable data and 2.92 hours unstable.

Local data storage:
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Swapped all local data storage media yesterday.

Pressure:
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Note that dat("p") = dat("P") - dat("Pref"), but that was probably also true before we sealed the reference side.

(+/- = ~1 std deviation)
p: ok, +/- 0.03 mb
t: ok, +/- 0.4 degC
Pref: ok, range = +/- 1 mb

Profile:
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Brief data losses around 23:00, July 10, and 07:00, July 12
(Why weren't all the RF losses on July 10 recovered from local data storage?)

diag: ok
samples.sonic: ok, see above
spd: ok
  ** neutral profiles have an increased gradient above 4m that is possibly
  ** an internal boundary layer caused by the upwind check dam
dir: ok
w: ok
tc: ok
w'w': ok
u*: ok
sigma_w/u*: ok (1.3 at night)
w'tc': ok
T: ok
RH: 4m may be low by less than 1% RH
P: okay

Upwind (hts=3.5):
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See Profile for data loses

diag: ok
samples.sonic: ok, see above for data losses
spd: ok, +/- 14 cm/s (6u has +15 cm/s offset in u)
dir: ok, +/- 3 deg
w: ok, +/- 5 cm/s
tc:  ok, +/- 0.16 deg
w'w': ok, +/- 0.01 m^2/s^2  (30 min avg for second moments)
u*: ok,  +/- 2 cm/s
sigma_w/u*: ok (1.3 at night)
w'tc': ok, +/- 0.02 m/s degC
tc'tc': ok, +/- 0.05 degC^2

Lower (hts=3):
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See Profile for data loses

diag: ok
samples.sonic: ok, see above for data losses
spd: ok, +/- 20 cm/s
dir: ok, +/- 6 deg
w: ok, +/- 5 cm/s
tc:  ok, +/- 0.25 deg
w'w': ok, +/- 0.01 m^2/s^2  (30 min avg for second moments)
u*: ok,  +/- 3 cm/s
sigma_w/u*: ok (1.3 at night)
w'tc': ok, +/- 0.02 m/s degC
tc'tc': ok, +/- 0.08 degC^2

Upper (hts=4):
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See Profile for data loses

diag: ok
samples.sonic: ok, see above for data losses
spd: ok, +/- 20 cm/s
dir: ok, +/- 5 deg; 6t is about 6.5 degrees off from profile sonic
w: ok, +/- 6 cm/s
tc:  ok, +/- 0.2 deg
w'w': ok, +/- 0.01 m^2/s^2  (30 min avg for second moments)
u*: ok,  +/- 3 cm/s
sigma_w/u*: ok (1.3 at night)
w'tc': ok, +/- 0.02 m/s degC
tc'tc': ok, +/- 0.07 degC ^2