

# Daily summary, July 2

July 2, 13:38 CDT  
Dan Rajewski (in Ames)

Summary: Stations 1-4 operational, no ISFS staff on site

**CORRECTION:** krypton hygrometer and possibly sonic at stn4 need replacement due to electrical harmonic 'noise'  
thunderstorm event around 0:15 CDT, followed by cold front passage  
light winds from the NW to NE early morning through afternoon

Vdsm: 13.5-13.8 V during day, down to 12.4 at night  
P: ok, pressure in close agreement among all sites

T.2m: ok, all stns in agreement

RH.2m: 60-65% during thunder storm passage; 90-95% before sunrise; stns 1-3 few %RH less than stn 4  
50-60 % during day; stns 1-3 lower than stn 4  
H2O.2m: night: stns 1-2 are ~1 g/m<sup>3</sup> less than stns 3-4  
day: stns 1-3 are ~1 g/m<sup>3</sup> less than stn 4

Wetness: wetness detected around 0:15, sensor dry by 7:45 CDT

T.10m: ok,  
RH.10m: ok, 85-93% stn 4 nighttime RH few% less than stns 1-3;  
afternoon RH ~55% at all sites  
H2O.10m: ok, before front passage stn 3 slightly higher than 1-2,4  
daytime stn 4 1 g/m<sup>3</sup> less than stns 1-3

Spd.10m: ok, all stns have similar magnitudes of speed  
Dir.10m: ok, stn 2 sensing more fluctuations around the 360 degree mark than for sites 1,3-4

T.10m - T.2m: ok, diurnal cycle as expected, very similar at all sites  
H2O.10m - H2O.2m: all sites about -2 g/m<sup>3</sup> (more moist near sfc) for daytime

spd.4.5m: ok, see comments for Spd.10m  
dir.4.5m: ok,  
w.4.5m: ok, after front passage with westerly wind all stns have w~ 0;  
before sunrise sites 1-2 w<0 and sites 3-4 slightly w>0  
pattern continues as winds veer from NW to NE in the afternoon

tc.4.5m: ok, stn 4 slightly warmer (0.5 degree) than stn 1  
ldiag: ok

vh2ov: 50 mV before storm, above 100 mV for remainder of overnight-afternoon  
kh2o: ok, front passage dropped the moisture from 21 to 14 g/m<sup>3</sup>  
h2o(licor): ok, in daytime stn1 > stn 3 (0.5 g/m<sup>3</sup>)  
ldiag (licor): ok

TKE.4.5m: ok, slight periods of stn1 higher than other sites (4:30-6:00, 9:30-10:30) other blips in early afternoon  
w'w': ok, see comment for TKE (stn1 is experiencing turbine wakes for northerly flow?)

w'h2o': ok, spike in data during thunderstorm storm passage; all stns in close agreement for northerly flow  
h2o'h2o': ok, spike in data during thunderstorm passage  
kh2o'kh2o': not ok; anomalous variance continuing in overnight at stn 4; though less 'noisy' than previous day (*watch for future cases of strong wind to cause greater erroneous readings?*)

w'co2': ok, stn 1 & 3 are in close agreement most of night and in daytime  
co2'co2': ok, large variance and change of concentration during storm & frontal passage