Daily summary, July 3,4

July 3-4, 15:25 CDT Dan Rajewski (in Ames) Summary: Stations 1-4 operational, no ISFS staff on site krypton hygrometer and possibly sonic at stn4 need replacement; harmonic noise still evident during night light winds from the NE to SE; under the influence of a sfc high pressure Vdsm: 13.5-13.8 V during day, down to 12.4 at night P: ok, separation of pressure in certain night periods (possible effect of multiple wakes reaching stns 3 & 4?) T.2m: ok, all stns in agreement RH.2m: 85-90% nighttime stns 1-3 few %RH less than stn 2-4 75[60]% day on July 3 [4]; stns 1-3 lower than stn 4 H2O.2m: night: stns 1-2 are ~1.0 g/m^3 less than stns 3-4 day (July 3): stns 1-3 are ~0.5 g/m^3 less than stn 4 (July 4): stns 1-2 are 1.0-1.5 g/m^3 less than stns 3 & 4 Wetness: light showers occurred from 15:00-16:00 July 3, possible dew event from 1:00-6:00, sensor dry by 8:00 CDT T.10m: ok, RH.10m: ok, 80-90% stn 4 nighttime RH few% less than stns 1-3; afternoon RH ~70% on July 3; ~50% for July 4 H2O.10m: ok, Spd.10m: ok, all stns have similar magnitudes of speed Dir.10m: ok T.10m - T.2m: ok, similar at all sites 3-4 degrees warmer at 10 m from 1:00-7:00 July 3, 23:00 July 3 to 3:00 July 4 H2O.10m - H2O.2m: ok, similar at all stns; nighttime only ~1 g/m^3 less at 10 m than at 2m with comments from T.10m - T.2m was a fog event occurring? (check ISU flux tower data in a few days) spd.4.5m: ok, see comments for Spd.10m dir.4.5m: ok,

w.4.5m: ok, all stns have w<0 when wind is nearly easterly, site 2 w>0 (afternoon of July 3 [4], ESE [SE] wind)

stns 3-4 w<0 for aforementioned periods

tc.4.5m: ok, Idiag: ok, a few flags recorded around 15:00-16:00 (light showers occurring July 3) vh2ov: ok, above 100 mV at stn 2, below 100 mV night July 2-early morning July 4 kh2o: ok, nighttime stn 4 greater than stn 2 (0.5 g/m^3, July 3), (~1g/m^3, July 4) h2o(licor): ok, btwn 13-18 g/m^3 for night to day behavior lidiag (licor): ok TKE.4.5m: ok, possible influence of intersecting wakes, but unclear differences btwn stns w'w: ok w'h2o': ok, low vapor flux on July 3 (~0.05 g/m^2/s), near 0.20 g/m^2/s on July 4

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kh2o'kh2o': not ok; anomalous variance continuing daytime and nighttime of July 3, daytime of July 4

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 in nighttime (moderate to strong sfc stability?)