

Daily status 9 Jan

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On site: Dong, Oncley (Militzer expected later today)

IOP5 ended early this morning with a cold front bringing 1-2" of snow.

Weather: low overcast in the valley, clear at higher elevations.

Summary: Everything working as expected. Some comments:

- Kryptons have had continual problems with frost/snow. Most clear themselves during the day.
- TRH's have plugged up in riming conditions. Use data with caution. (It will be challenging to identify these cases.)
- Props occasionally read lower even in winds greater than stall speed. <might> be real, but icing also possible.
- Precip tips overnight are the first real observations we've seen since we've been here (2 Jan)
- Soils are freezing, making Qsoil measurements (that only measure liquid water) decrease
- Conditions yesterday had Gsoil nearly constant; the digitizing resolution (0.1 W/m²) is seen in the data at all sites (except 7)

Vdsm: ok, lowest values 12.0-12.3V. We may brush off panels today.

Vmote.rad: ok, lowest values 12.5-12.9 V

Vmote.soil(aux): ok, lowest values 12.3-12.9.

Current Conditions:

P: ok 835 to 870 mb, with weak minimum last night. Now rising.

Tbaro:

T: ok -14 to -6 degC now, with up to 7 C drop at 6 overnight (but 2,5,7 show no drop)

RH: 85 to 97% now

Q: ok

Rainr (3,4,6): Tips overnight at all sites are real 1.0--3.1mm total

Spd (1,6): ok, 1,5 m/s now.

Dir (1,6): ok, westerly now.

csat diag: ok. Some spiking at 4,6 (and perhaps others) associated with snow.

samples.sonic: drop at 7AM this morning at 2,3,6 presumably snow related

spd: ok, 1--5 m/s now

dir: ok, W or N across network

u'u': ok, 0 to 1 m²/s² dominated by events at 1 and 6 yesterday

v'v': ok, 0 to 1 m²/s² dominated by events at 1 and 5 yesterday

w'w': ok, 0 to 0.2 m²/s² (rather quiet in yesterday's haze)

u*: ok, 0 to 0.4 m/s

sigma_w/u*: 1 and 5 sometimes low

tc: ok, -16 to -6 degC now

tc'tc': ok < 0.7 degC²; large nighttime values at 1,5,6

w'tc': ok, -0.03 to 0.05 m/s degC (-30 to +50 W/m²)

kh2oV: all but 6 and 7 went to zero in last night's snow. 1 is recovering itself. Max values yesterday 0.7--3.1 V. Time to clean 2,3,4.

kh2o'kh2o': daytime very small, large values as sensors were covered last night

w'kh2o': small values during day; night values larger due to snow

All uplooking radiometers likely have snow on them this morning...

Rsw.in: ok, max only 400 W/m² yesterday

Rsw.out: ok, max 300 W/m² yesterday (snow cover at all sites)

albedo: ok, 0.7-0.9 at all sites, some with sun angle dependence

Rsw.dfs (1,7): up to 350 W/m² at Playa, 200 at River (large values could be real in yesterday's haze);

SPN-1 agreed with shadowband yesterday, but differs today, likely due to snow.

Rsw.global (1,7): max 250 W/m² yesterday

Rlw.in: ok, 200-290 W/m²

Rpile.in: ok, -90 to 0 W/m²

Tcase.in: ok, -15 to +1 degC

Tdome.in (1,2,5): ok, -15 to +1 degC

Rlw.out: ok, 220-300 W/m²

Rpile.out: ok, -50 to +10 W/m²

Tcase.out: ok, -14 to +1 degC

Tdome.out (1,2,5): ok, -14 to +1 degC

soil.aux at E & W Slope (5,6)

Tsoil: ok, abc2, eslope5aux, river7 now frozen. Some sites have very little variation (which is ok)

Gsoil: ok, with little surface forcing yesterday, fluxes nearly constant -- see digitizing resolution in data.

Qsoil: 7 (Eslope/River) to 29 (Hiland) %vol; expect values to go to 0 as soils freeze.

Cvsoil: ok, 5e5 (Wvalley, Eslope, River) to 1.8e6 (Playa, Wslope) J/(m³ degK); strange abc jump yesterday.