

soil comments

TP01:

We've seen the Lambdasoil/Csoil problem before. I'm convinced that something is wrong in the signed math code in the TP01's PIC. If Vpile.off goes even slightly negative, it is reported as NaN by NIDAS. This behavior wouldn't rule out a NIDAS/mote parsing error, however the TP01's derived value for Lambdasoil (that depends on Vpile.off) also comes back as NaN, even though it should always be a positive number. Ideally, new code would be written, loaded onto a laptop, and downloaded to the sensors at each site. Otherwise, we can write code that sets Vpile.off always to 0 (a good assumption) and recompute Lambdasoil. To do this, we need to know the serial number of each TP01, since this calculation involves sensor-specific calibration coefficients. (This was the reason we had the PIC do the calculation in the first place.)

I'll talk to SRS about this code.

Single-soilT probe:

Chris and I discussed his installation of these probes (he did at FLR and FAR). He oriented them horizontally, nominally at the level of the second? picklefork tine (1.9cm). However, there have been HUGE soilT vertical gradients -- 15 degrees between 0.6 and 4.4cm is common in the middle of the day -- so even a small vertical (or even horizontal?) difference in position could cause the differences of up to several degrees that we are seeing.

I don't know how Kurt and Gordon positioned this sensor at NEAR.

I don't believe any action is required at this point.

The data show that the single probe appears to be at 0.6cm at flr, 2.5cm (or averaging) at near, and 4.4cm at far.