

RMYoung issue

We think we've figured out our problem with the RMYoung sonics – our power supplies are not producing high enough voltage. The RMY has a minimum voltage requirement of 12V and our power supplies are producing 12V. However, the voltage drop through as much as 55m of DC cable (from the fuse boxes on the power drop through the DSM to the sensor) has been 0.5V or more. tnw11, for example, was reporting $V_{dsm}=11.2V$. We note that the minimum voltage for all other sensors is below 10.5V, so this is a problem specific to the RMYs. This explanation is consistent with these sensors working in the ops center (and earlier, at ARL), but not on the tower.

The solution is to use higher-voltage power supplies for the (7) masts that have RMYs and AC power. (Solar-powered stations should have batteries providing nominally 12.7V.) We've ordered 14 V supplies that we will bring with us on the next trip. (They need to have our DC power connector added to them before use, which is easiest to do in the lab.)