

VDC Ethanol Level Readback 9/18/17

The level of the ethanol in the upper reservoir has been monitored through EPICS for a long time.

I put two strips of copper tape on either side of the sight tube. The sight tube is polyethylene.

The copper strips are connected to the inputs of a capacitance to voltage converter from Analog Microelectronics. CAV414

The voltage output is sent to an HPI313 ADC read out by EPICS.

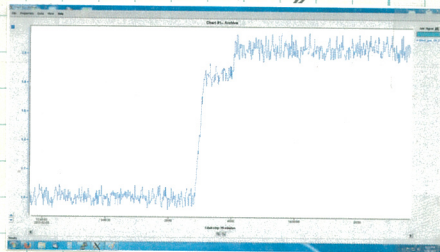
I never really calibrated the setup. In February I had to fill the reservoir and decided to take some notes. This was done on 2/5/17 at about 15:30.

I started with 1.18" in the sight tube. I added ethanol till there was 4.005". I paused for a little bit of time. I added ethanol till it was at the top of the sight tube 5.215".

$$4.005" - 1.18" = 2.825"$$

$$1.85V - 1.0V = 0.85V$$

$$0.301V/in$$



$$5.215" - 4.005" = 1.21"$$

$$2.2V - 1.85V = 0.35V$$

$$0.289V/in$$

Use the .3V/in value. The ~~top~~ copper tape does not extend completely to the top of the sight tube. I think I was just curious to see what would be the result.