



UCIRVINE

PD-VD Purity Monitor Update

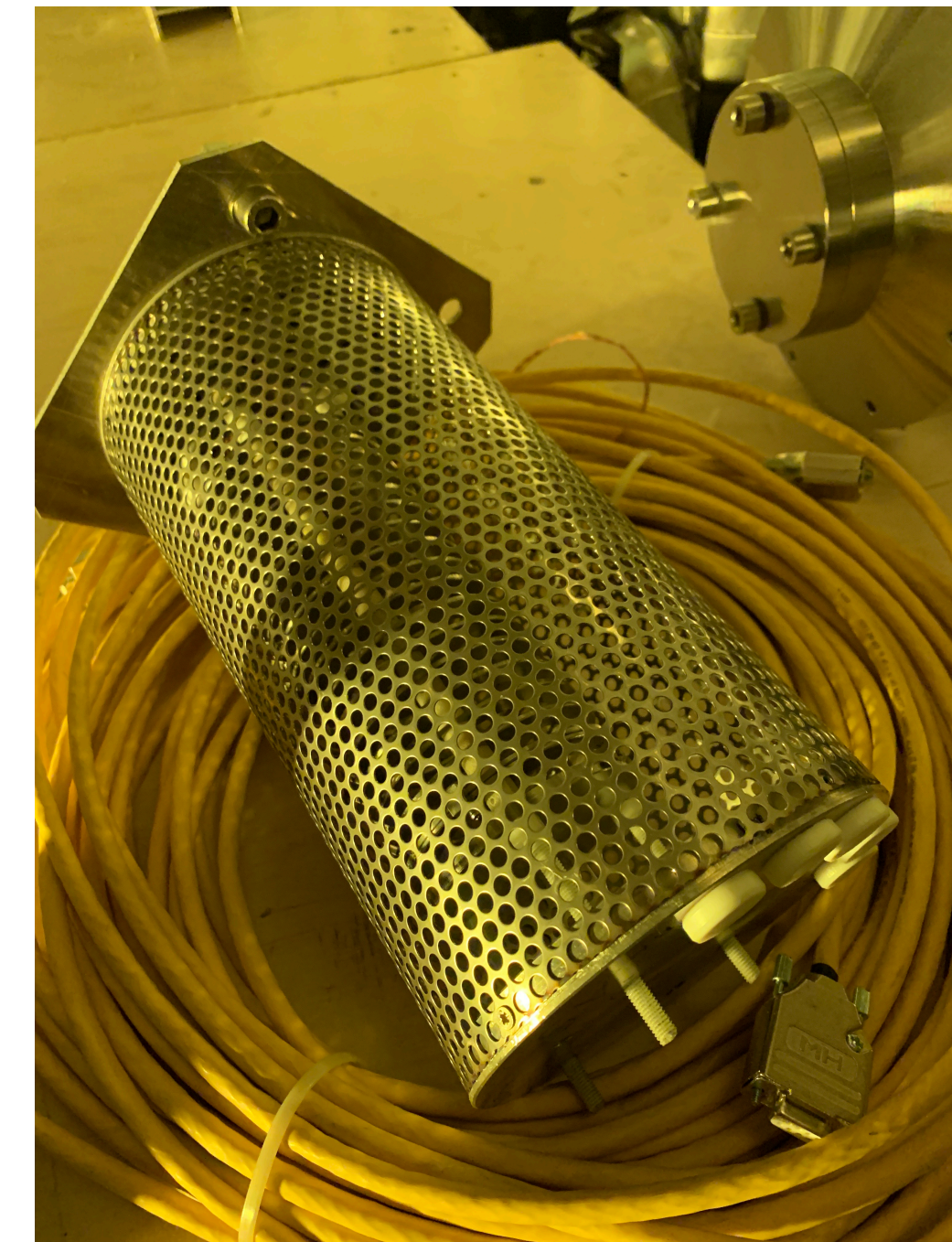
Wenjie Wu (UC Irvine)

CALCI Consortium Meeting

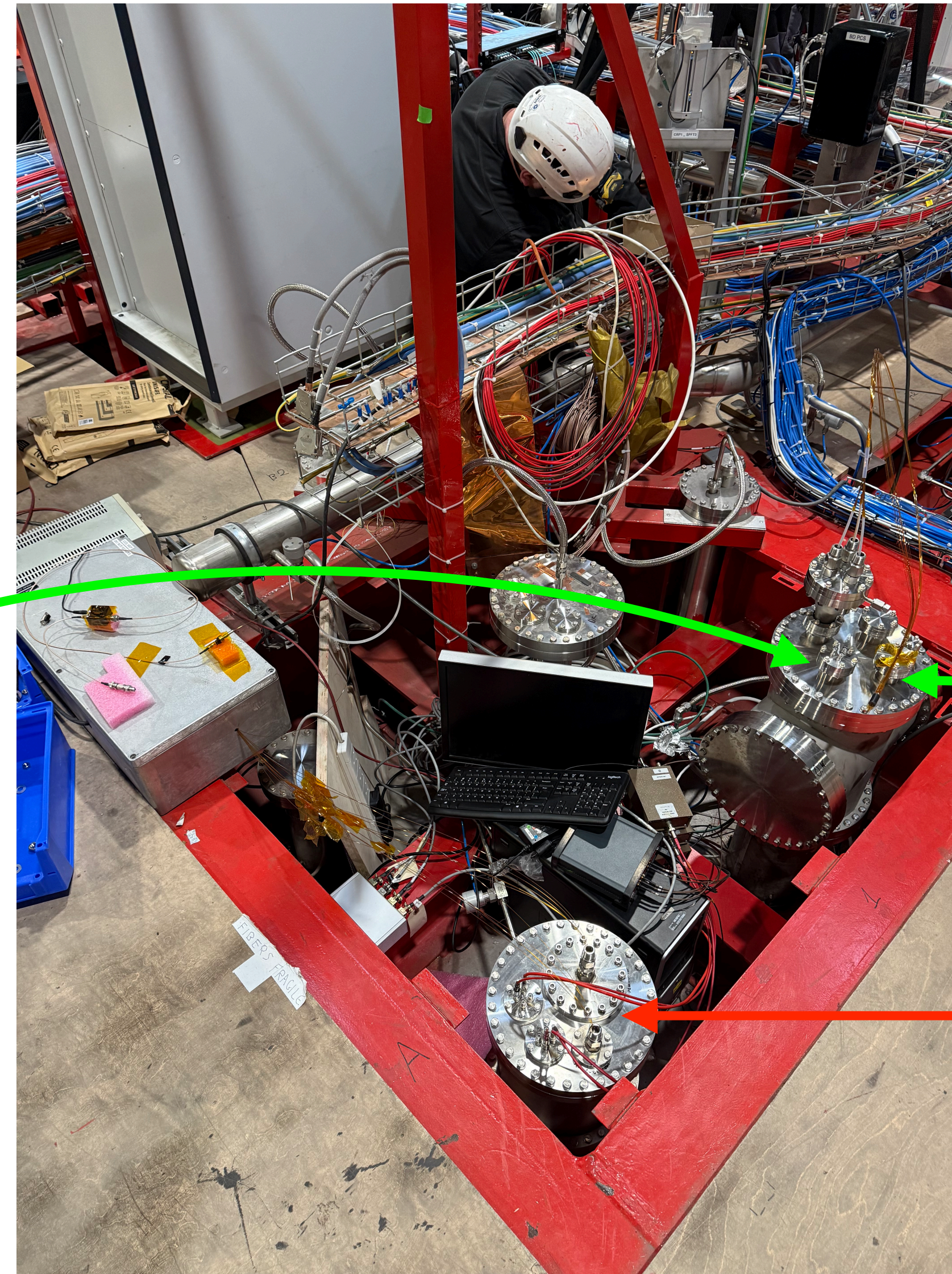
December 5, 2024

Purity monitors in PD-VD

- 3 PrMs from ProtoDUNE-I DP will all be re-used
 - Two short PrMs (UCL), **One long PrM (UCIrvine)**



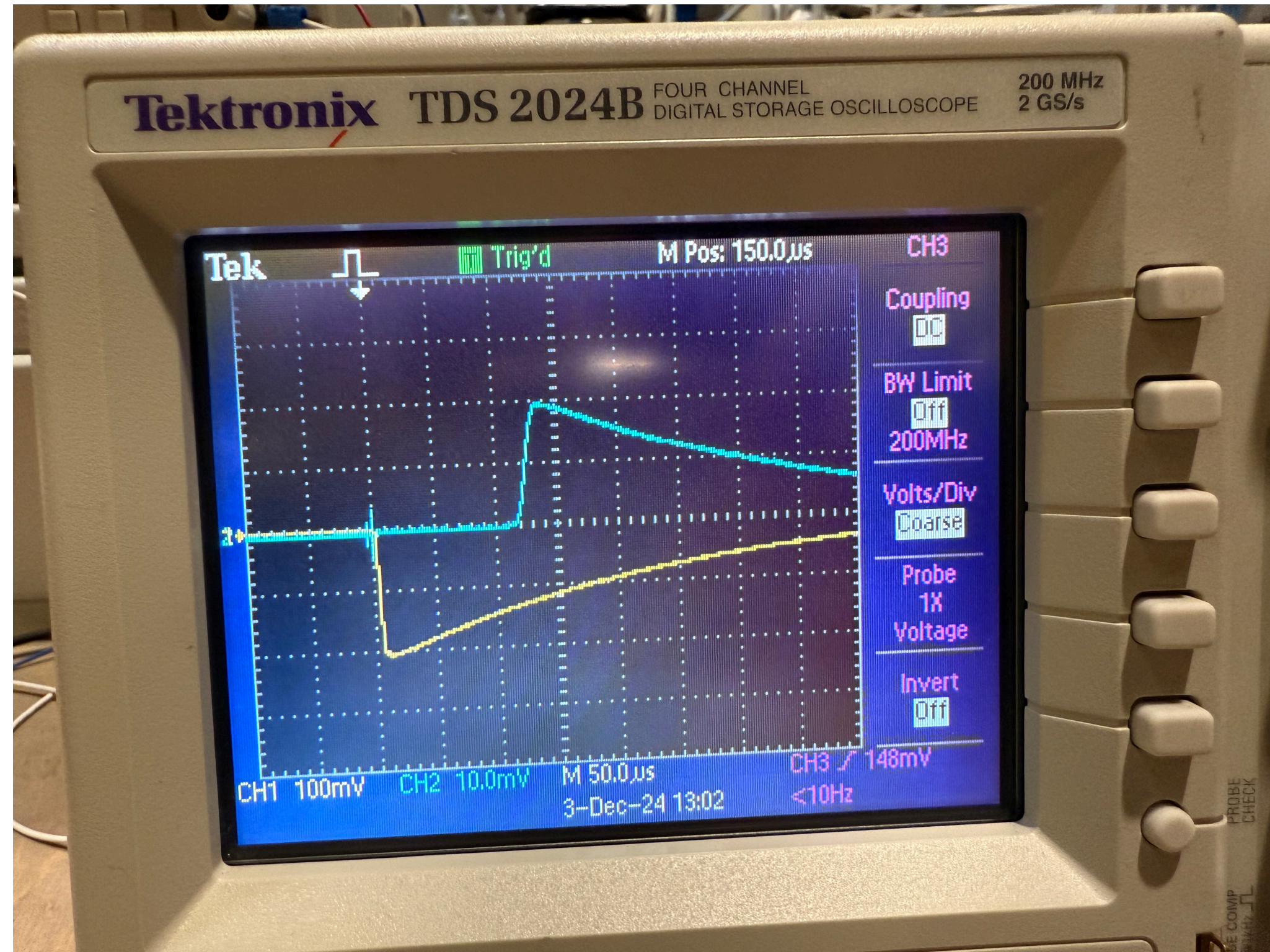
Installation on Nov. 22



UCIrvine

UCL

Signal in gas



$V_c: -30\text{ V}$, $V_a: 300\text{ V}$

Larger signal strength than the long PrMon in PD-HD

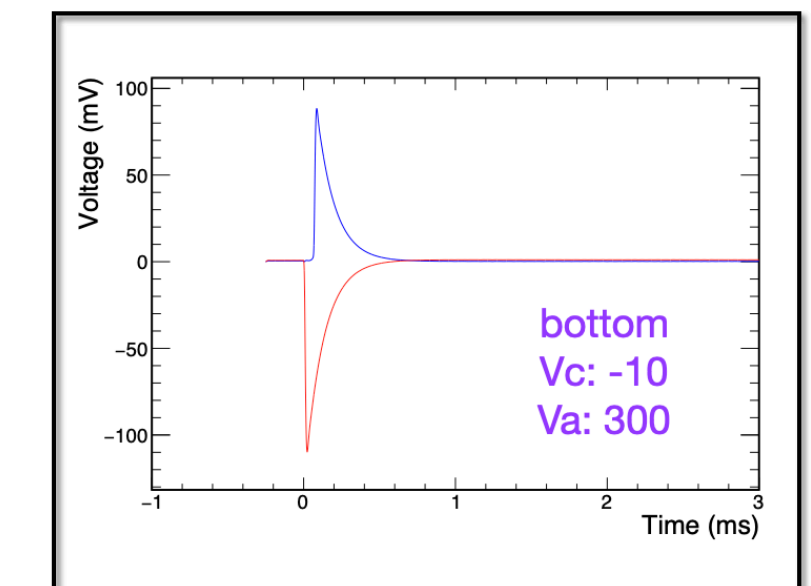
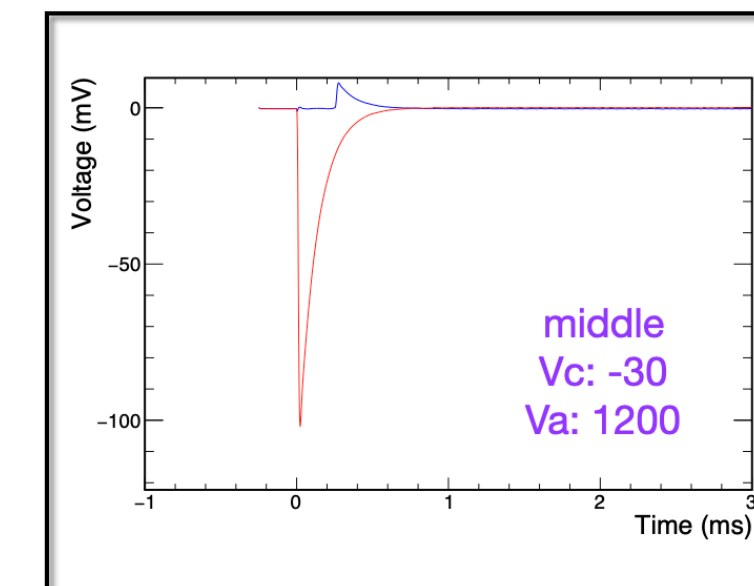
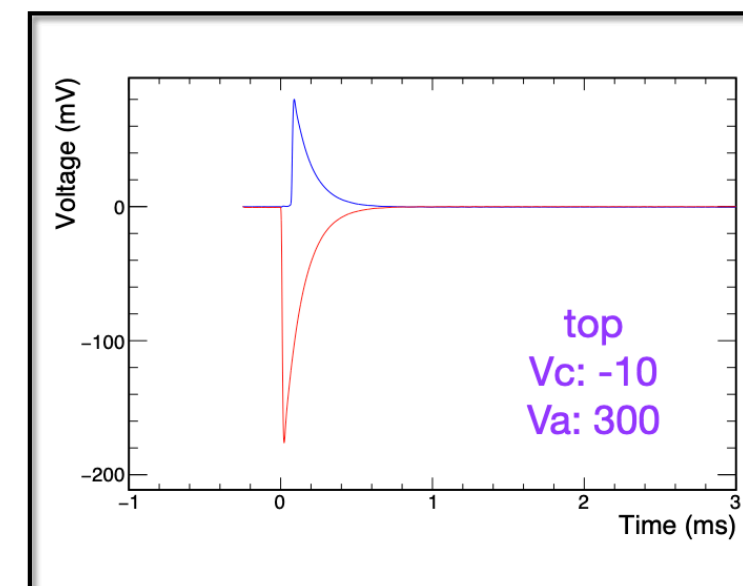
First look in argon gas before cooldown

PD-HD

3/6/2024 ~9am, Temperature: 304 K

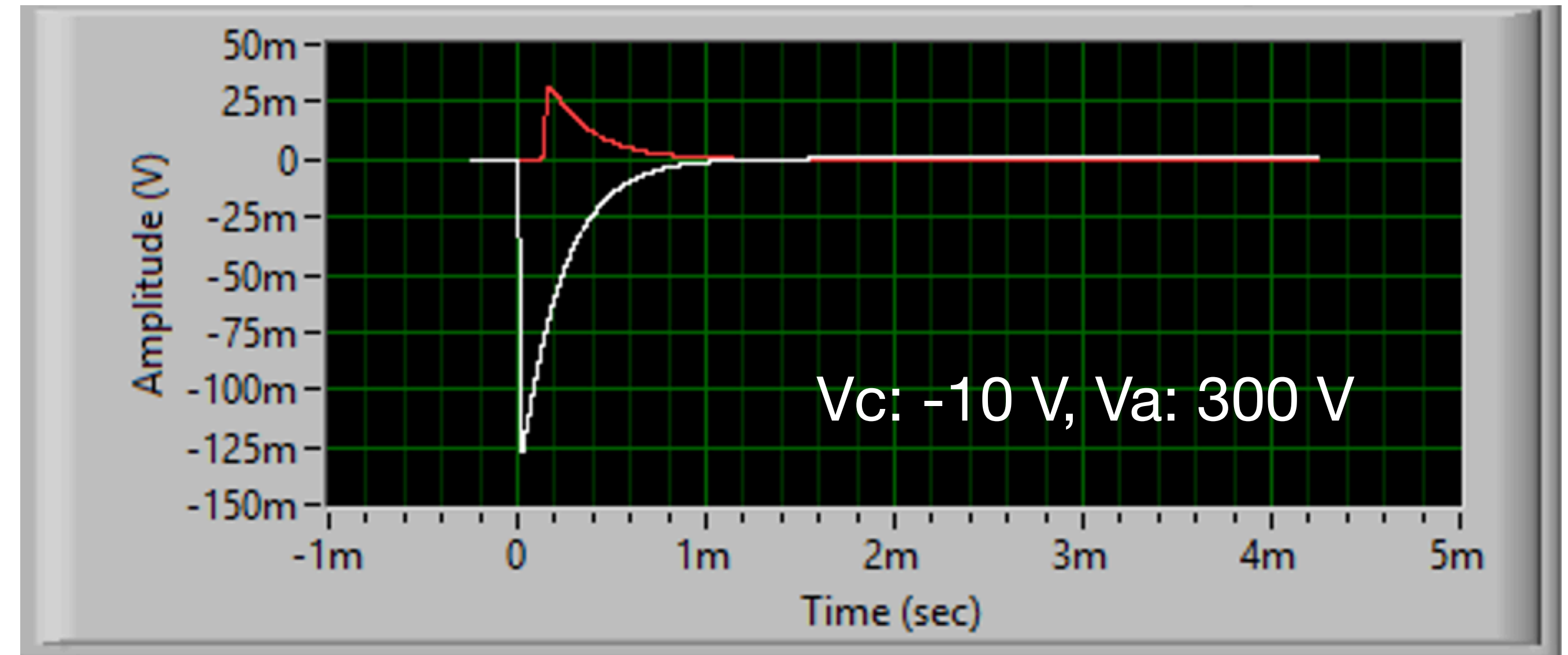
Middle PrM has smaller cathode signal with the same voltage setting

Middle PrM has smaller anode signal because of the long drift distance



Remote readout

Same LabVIEW program used in PD-HD, but reading only one PrMon for PD-VD



Integration

- Integration to DCS is ongoing
- Coordinate data-taking with UCL PrMons and PMTs
- LAr transfer from NP04 to NP02 is happening tomorrow morning
 - Will run PrM in gas phase before it's immersed in LAr