

ProtoDUNE Purity Monitors Installation (Updates)

Wenjie Wu

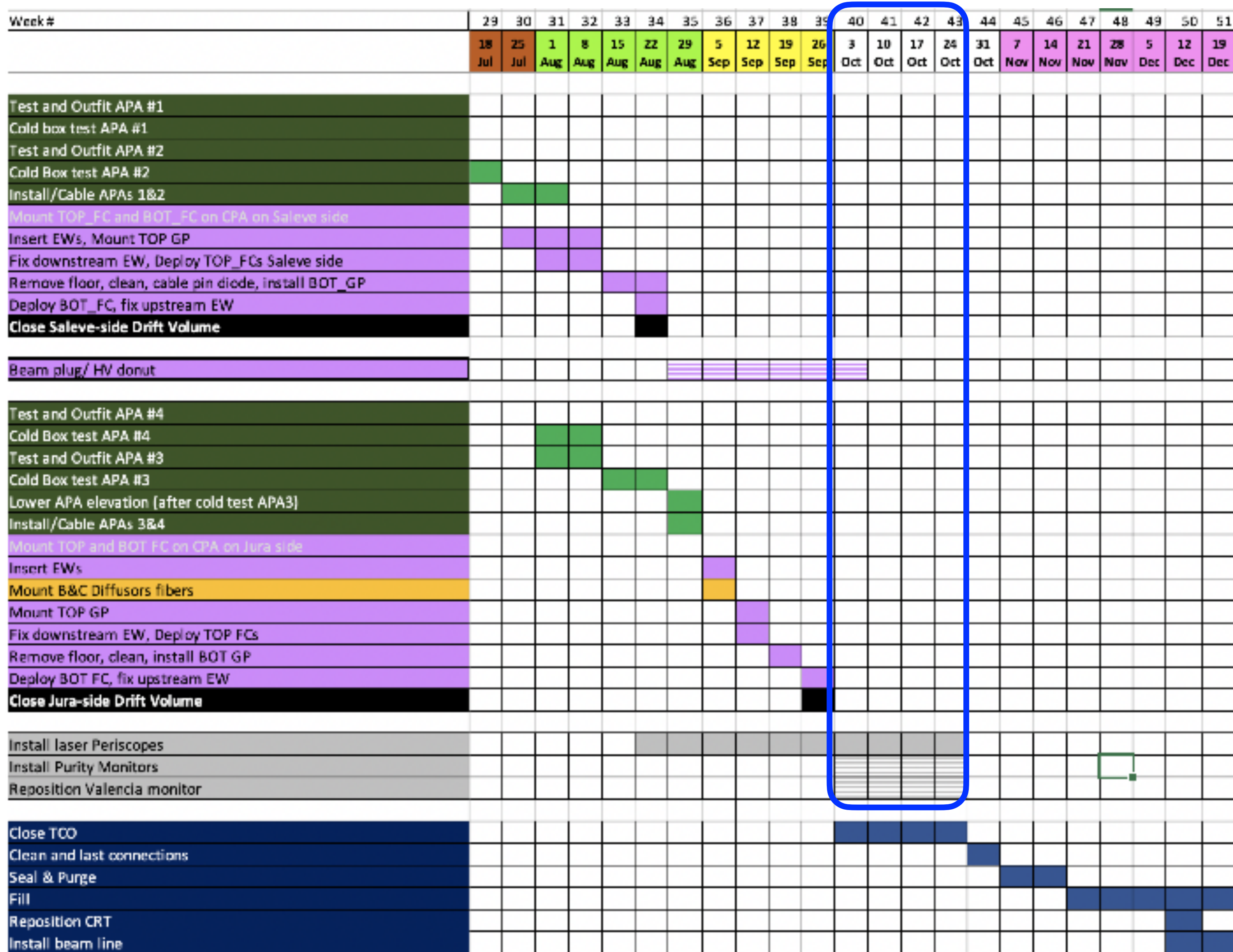
University of California, Irvine

July 21, 2022



UCIRVINE





From Daniela
(July 19, 2022)

Long purity monitor shipping from Irvine

- The long purity monitor being installed in ProtoDUNE-II HD.
- Tested at the lab, in both vacuum and argon gas.
- Packed with tools to re-assemble at CERN. 6 boxes in total, on one pallet (~114 kg).
- Picked up by the shipping company on July 14, arrived at Geneva on July 20, waiting for custom clearance.

unit: inch	+4"	+2lbs							
Box #	Box Size (WxLxH)	Box Weight (lbs)	Name	Qty	Total Size (WxLxH)	Total Weight (lbs)	Note	Manufacturing	Model #
1	24"x20"x20"	59.6	Wiener MPOD Crate	1	17.25"x16.25"x8.75"	57.6		Wiener	Mini-MPOD
			ISEG Module	2				ISEG	
2	20"x20"x11"	23	Front-end Electronics	1	10"x13"x6"	7		UCI fabricate	
			8" Flange	1	12"x12"x7"	14			
3	22"x22"x13"	60	Cable Tools	1	9"x11"x8"	7	Wire strippers, plier, heating gun, terminals		
			Shrink Tubing	1	11"x7"x3"	1			
			Teflon Tubing	1	16"x16"x1"	1			
			Fiber Cleaver	1	6"x7"x3"	1			
			Spare Tools	1	8"x12"x6"	22	Wrenches, Nuts, Washers, Cable tie		
			Insulation Tester	1	11"x12"x4"	5		Megger	MIT2500
			Grid mesh	1	7"x12"x3"	1	SST grid mesh		
			Cathode	1	9"x9"x6"	1	Gold coated aluminum plate		
			Gasket	1	10"x12"x2.5"	5	Copper gaskets		
			Fiber spools	1	17"x17"x5"	4.5	Optical Fiber	Molex Inc.	FDP600660710
Spare Parts of Flange	1	9"x17"x5"	10	Valves, Fiber Feedthrough, HV Feedthrough, Mounting Tubes					
4	16"x16"x44"	50	Dewar	1	7"x7"x38"	48			
5	24"x24"x5"	14	SST Base	1	18"x18"x2"	12			
6	12"x12"x48"	22.2	Purity Monitor with Cables	1	6"x6"x35"	20.2	include short rods and endcaps	UCI fabricate	
Total Number of Boxes		Total Weights of Boxes (lbs)		Total Number of Items		Total Weights of items (lbs)			Total Value
6		228.8		19		217.3			
Pallet	Dimension: 41x48x35, weight: 250 lbs.								

CFRN PACKING LIST 2022

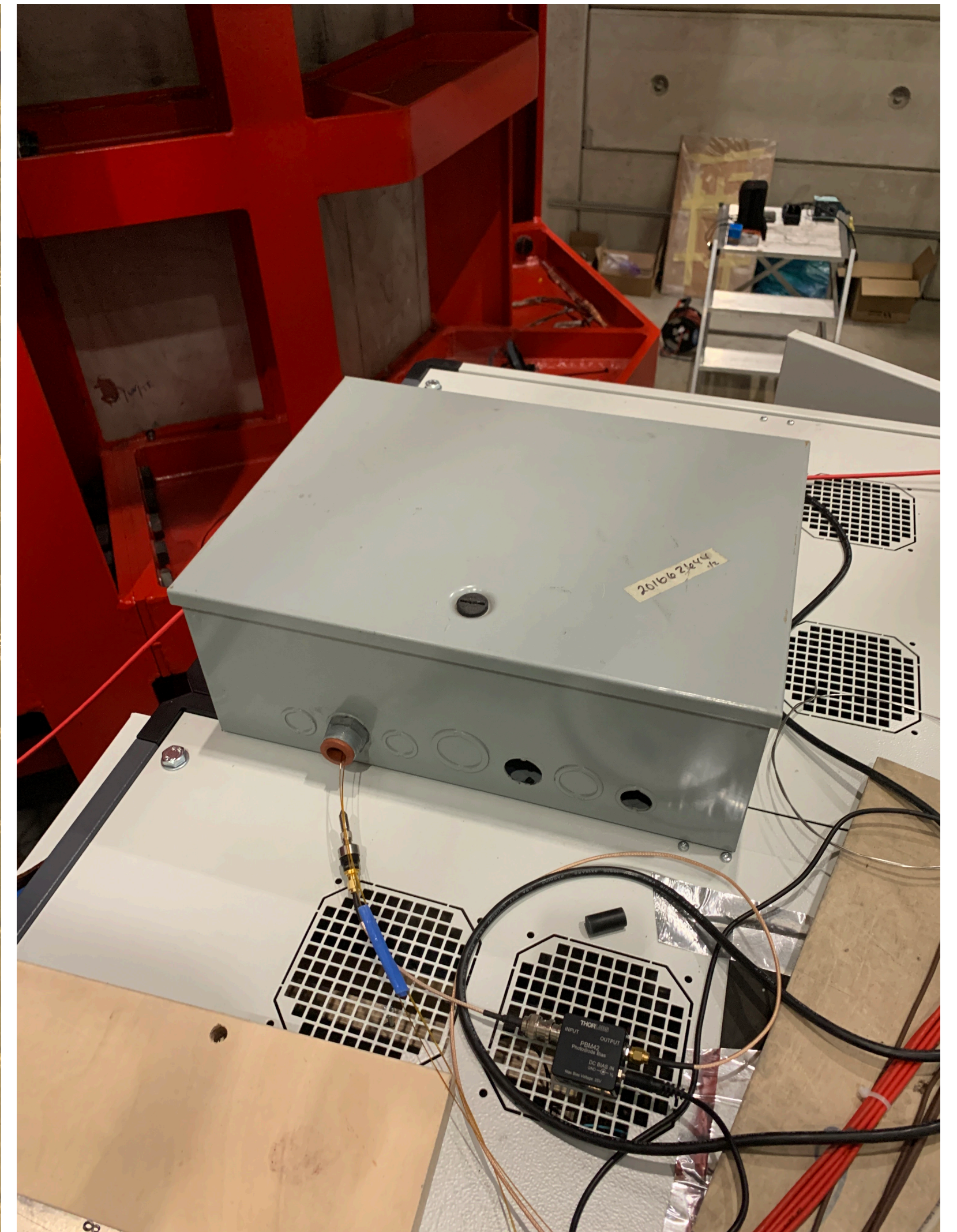
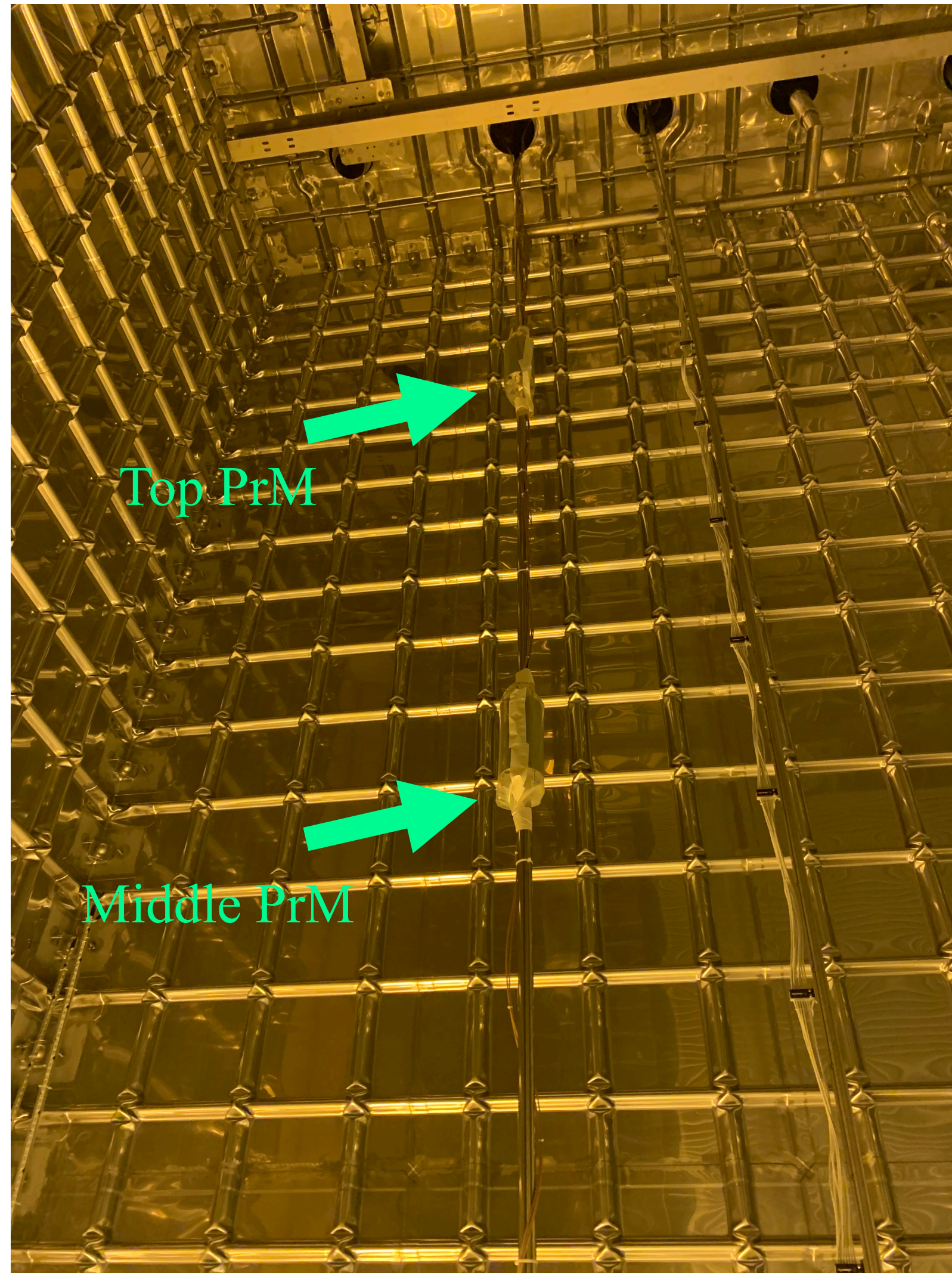


Long purity monitor shipping from Irvine



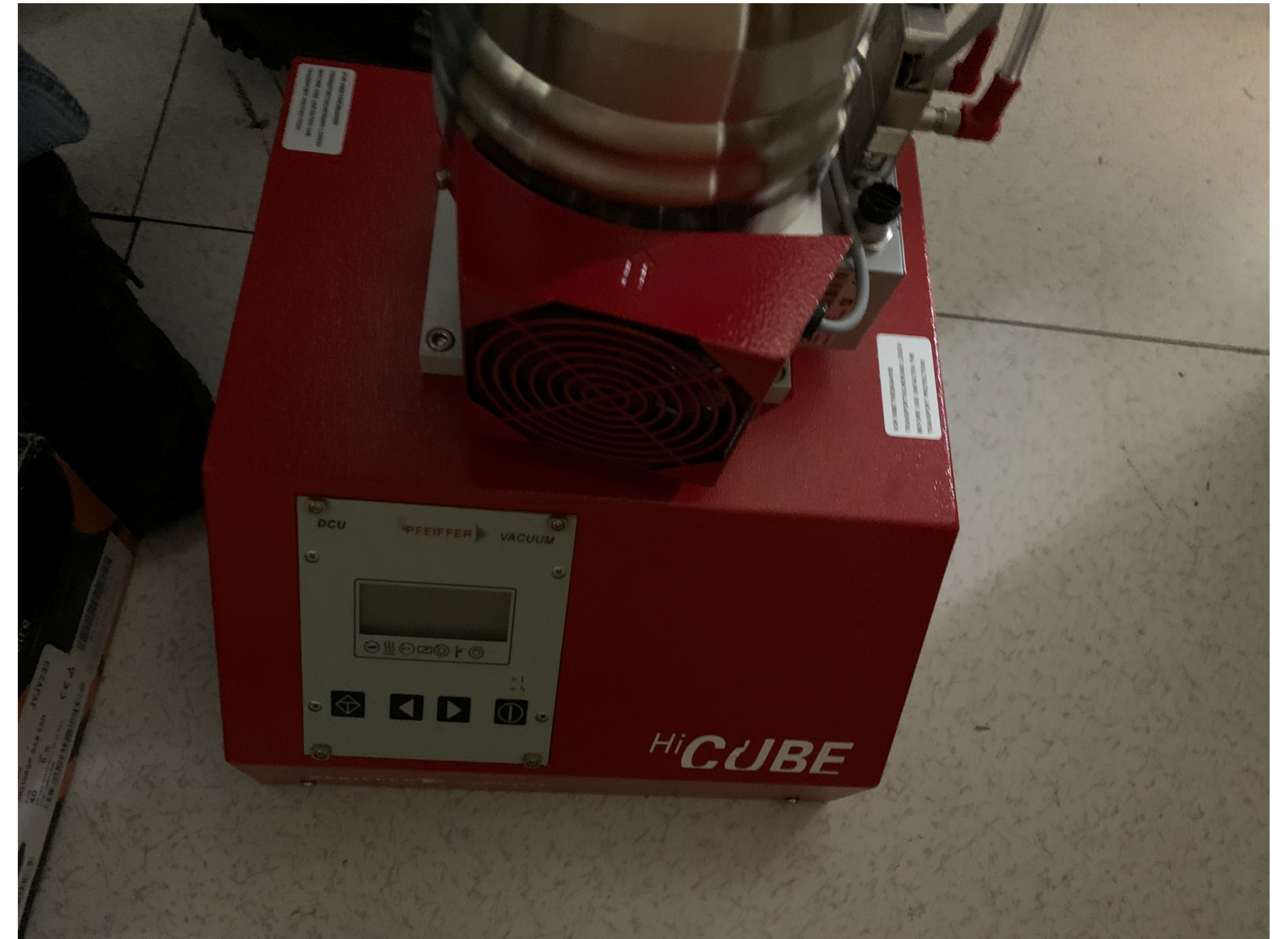
Purity monitors (and accessories) at CERN

- One purity monitor (bottom PrM) is used in the vertical drift cold box.
- The other two purity monitors are located in the cryostat.
- The xenon lamp is connected to the purity monitor in the VD cold box.
- The large tube used to test the whole assembly for PD-I is stored b184, Meyrin site. Can be transported back to ENH1 as needed.



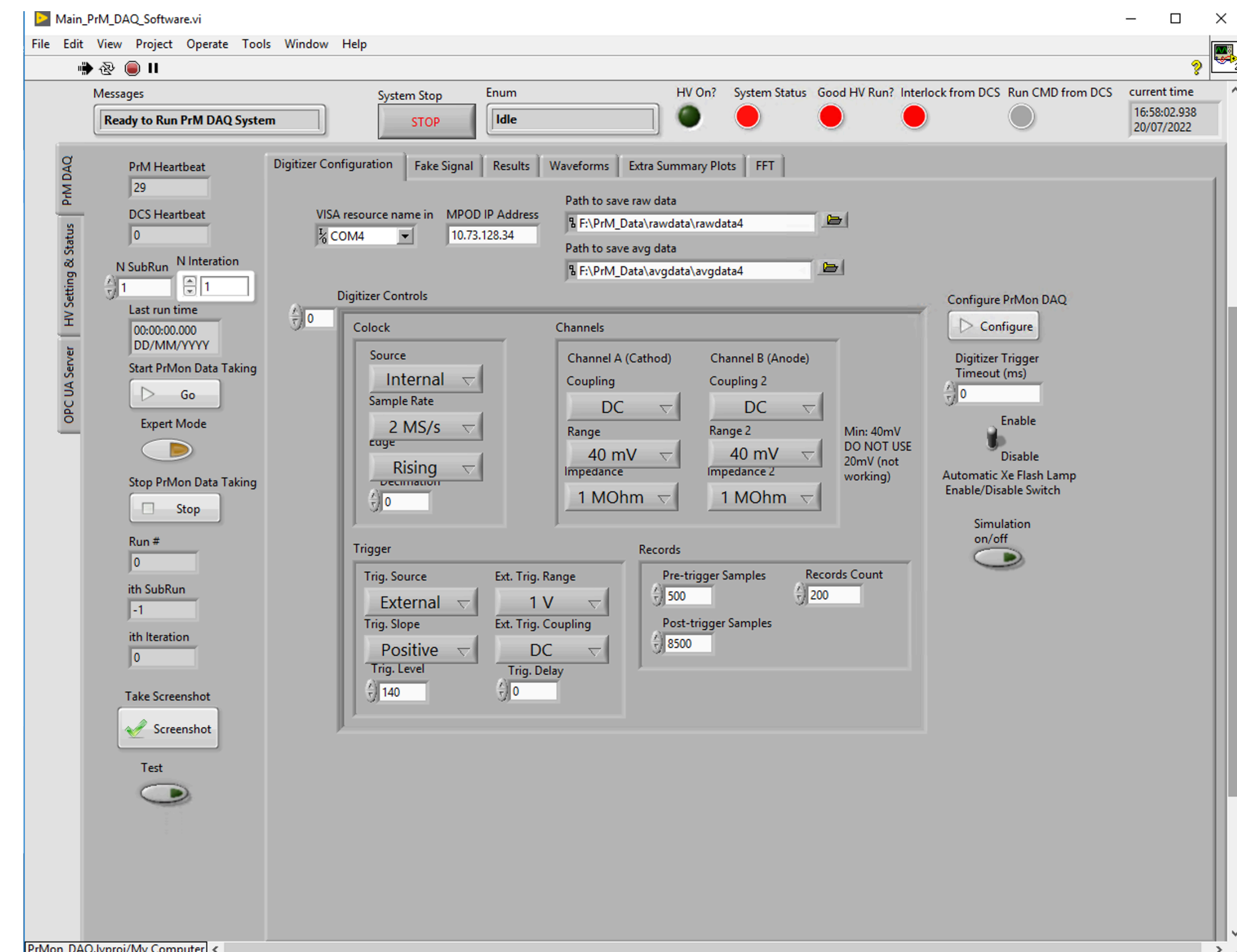
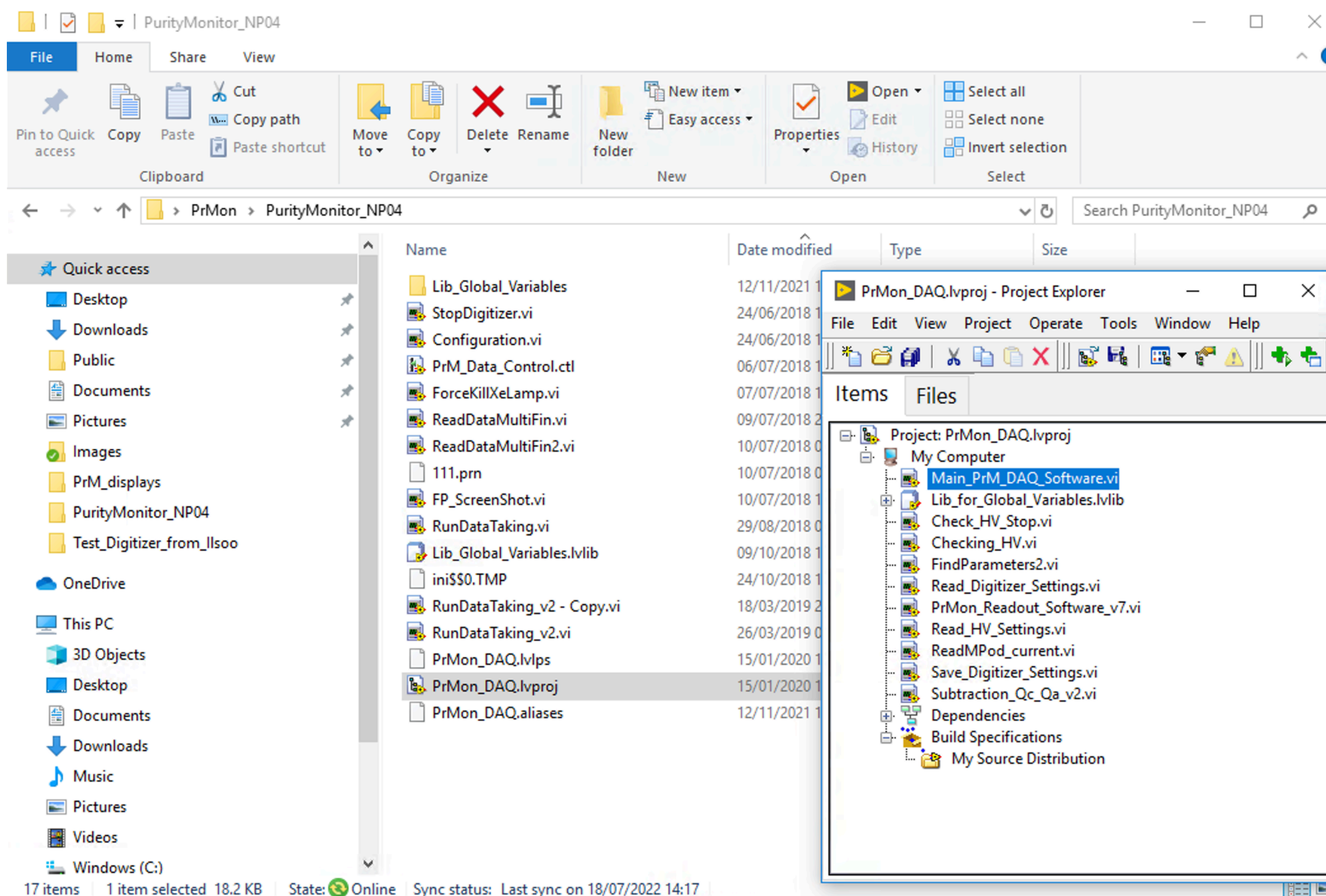
Purity monitors (and accessories) at CERN

- The vacuum test stand is shipped along with the long purity monitor.
- Found a turbo pump in EHN1, will be used to test long PrM once it arrives at CERN.



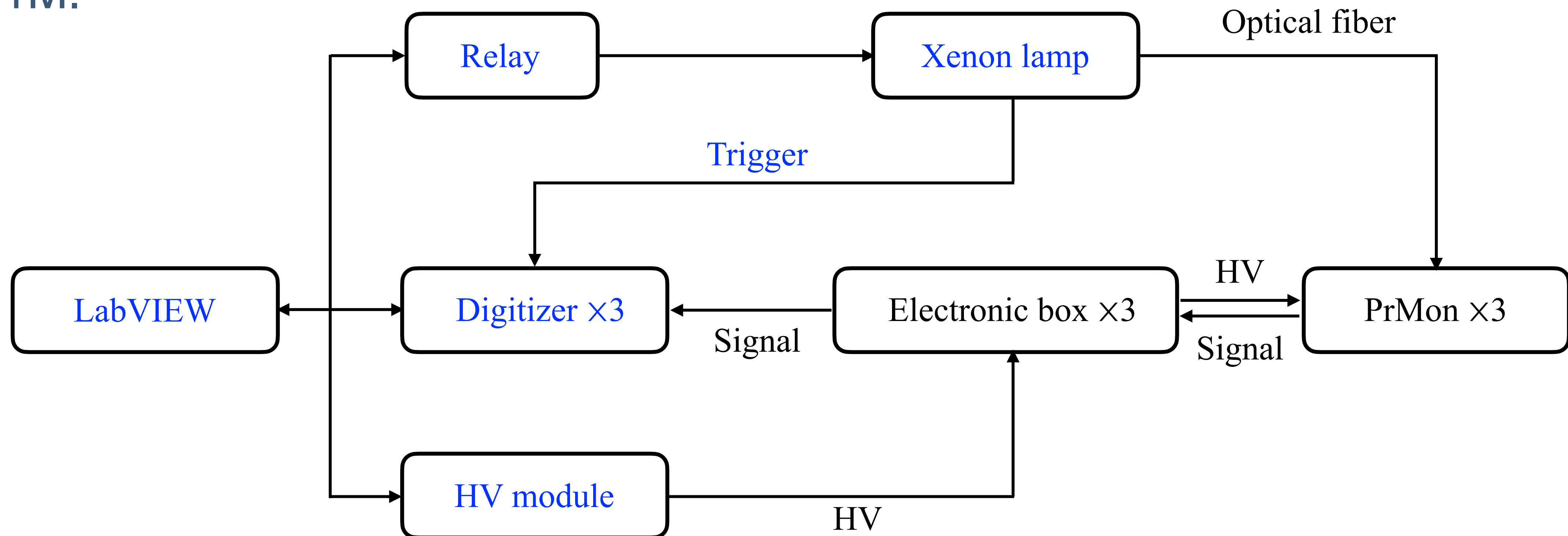
Software on the DAQ computer (np04-pm-002)

- LabVIEW program used to take data is on the DAQ computer.
- Remotely accessible.



Software on the DAQ computer (np04-pm-002)

- LabVIEW program used to take data is on the DAQ computer.
- Remotely accessible.
- Will do test runs when the test stand arrives: HV module is shipped with the PrM.



Summary

- The long purity monitor is en route, along with the accessories needed for test and assembly.
- The DAQ software is ready and will be tested with the test stand when it arrives.
- The current schedule allows us to perform more tests to ensure the system works fine before installation.