

260-L LAr System Progress Report

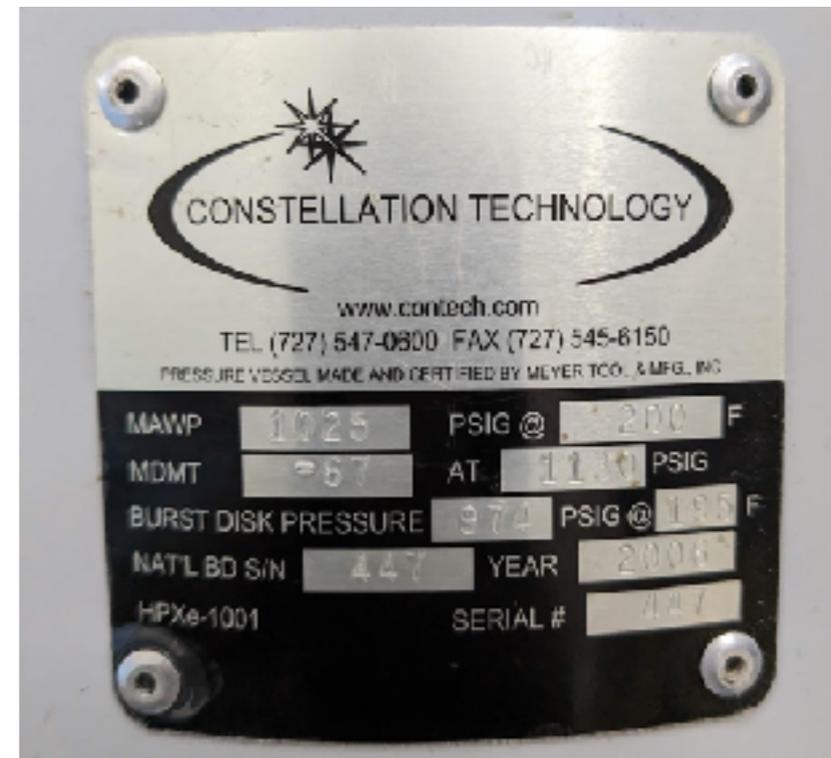
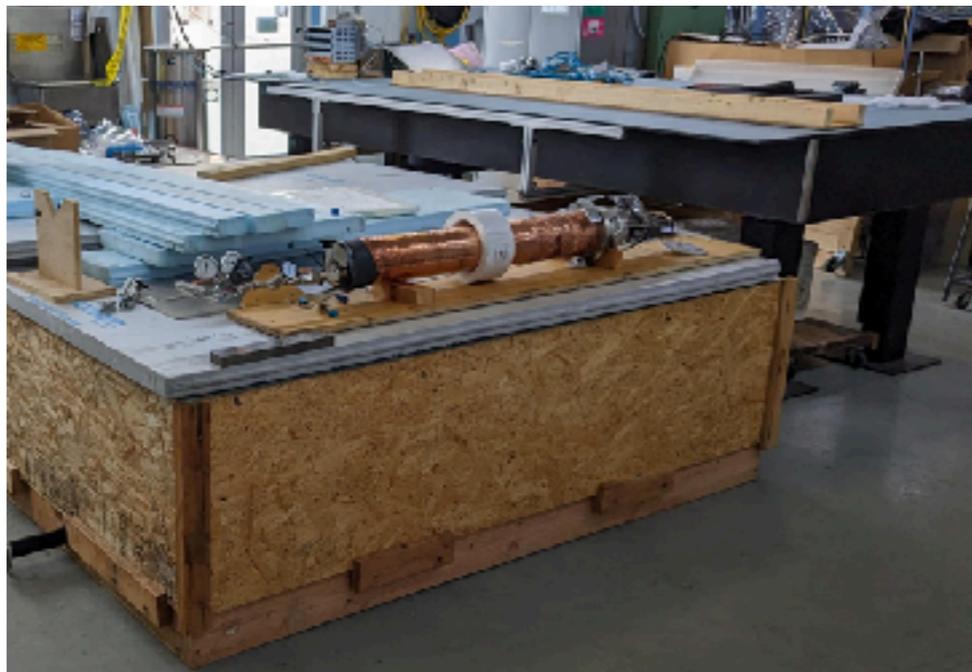
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Lab Safety and Space Management

- Covid-19 public health emergency ends Thursday, 05/11
- ESH Inspection L1 last week
 - No complaints about the highbay lab
 - Some questions were raised about the Xenon extraction setup
 - The operation of filling sample gas cylinder for analysis is covered in the ESH as part of compressed gas handling
 - Documentations and detector safety info provided to safety
 - For the future batch transfer of Xenon from 14 detectors to the central storage cylinder would need safety review



Xenon gas for PIONEER

▶ **Xenon Chemical Analysis**

- Results are due by the end of this week

▶ **Xenon storage cylinder**

- We need 1-2 N265 cylinders to collect all Xenon from the 14 detectors
- The source of the Aluminum cylinder used by nEXO is not available in small quantity
- Trying to get the cylinder from other sources

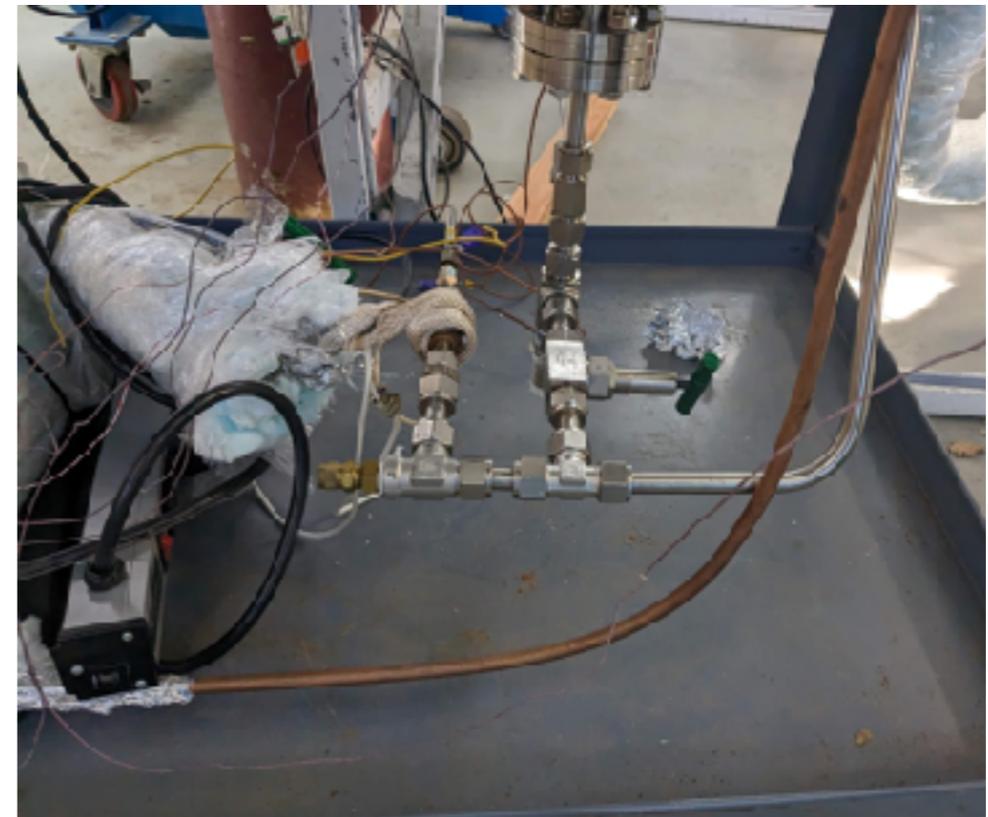
▶ **Xenon transfer**

- Need to make arrangements with lab property management to convert the material before loan it and ship it abroad
- Given the current market price of Xenon is \$18/g, it mostly will be treated as precious material. As a reference, Silver price is \$0.82/g, Gold price is \$65.30/g

260-L System 2nd purity run

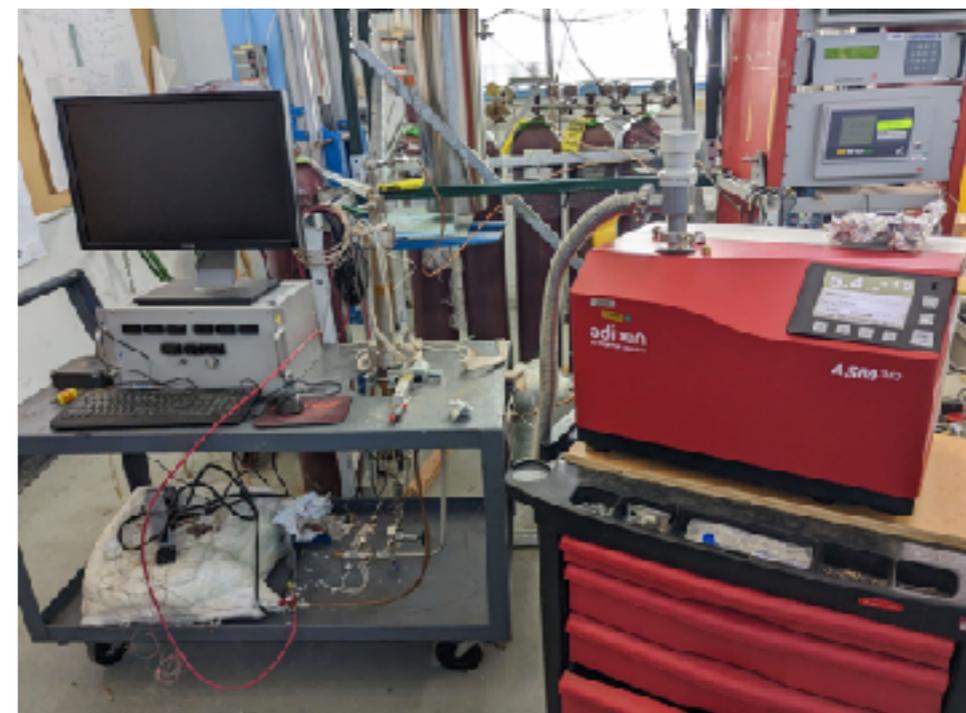
► **Inline filter plumbing**

- Given the purifier cylinder is flipped, the plumbing is redo with new parts
- Leak check is expected to be done today
- Activation is expected to start tomorrow
- Our own leak detector has been shipped to the US distributor in NH. Vendor is making arrangement for shipping
- Check with the plan: https://docs.google.com/document/d/14GnwKKO2w51nc-pjVz_HpPn-AMeLpFyGILf3rRBCh5U/edit#



260-L System 2nd purity run

- Leak check found a gross leak at the beginning of the new plumbing
- New parts and fresh tubings were used to fix the leak



Procurements and Misc.

▶ LAr heater quote received

- Total cost is \$6k for 2pcs, ~\$2.2k for each heater, \$1.6k for engineering, lead time 26 weeks

▶ Quote for 6000-gallon LN2 plumbing

- CryoFab found ASME compliance joint that can provide a quote for the system
- Most likely needed for bidding process

▶ Quote for gas sample manifold welding

- ANCORP's welder confirm they can do the work, providing a quote

