

260-L LAr System Progress Report

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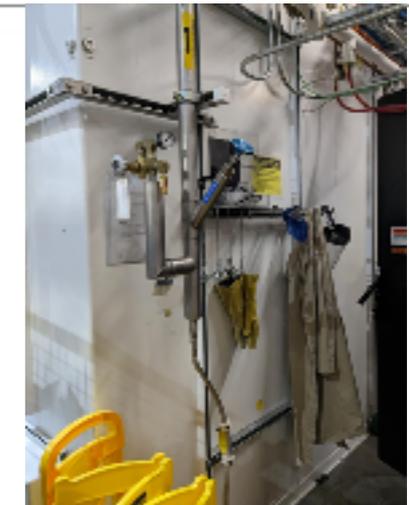
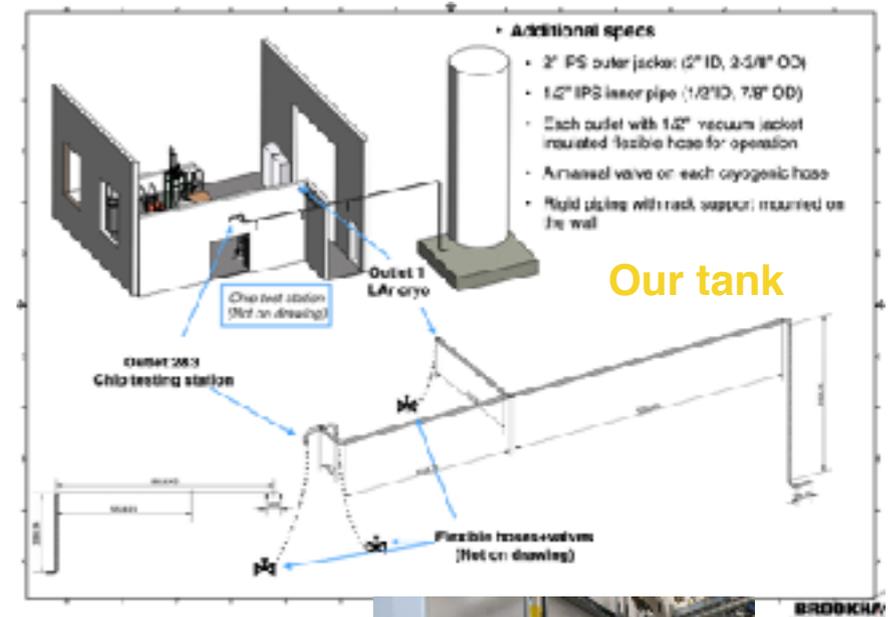
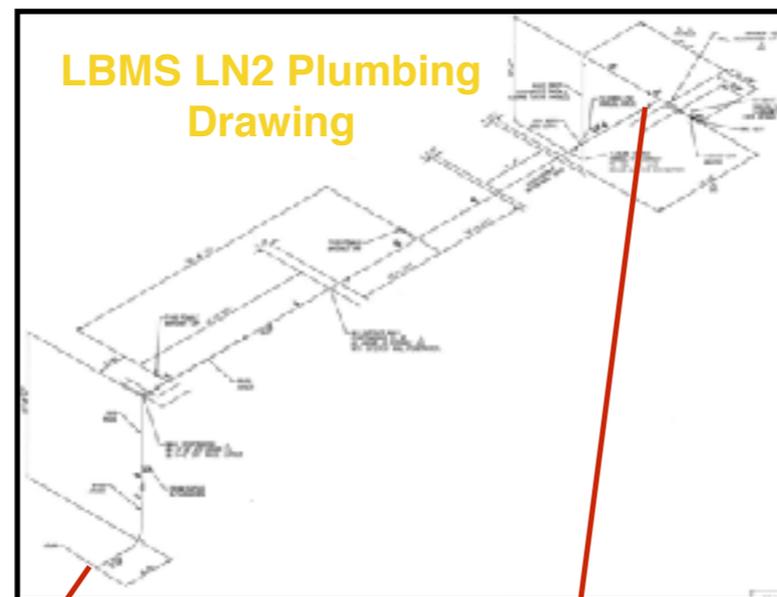
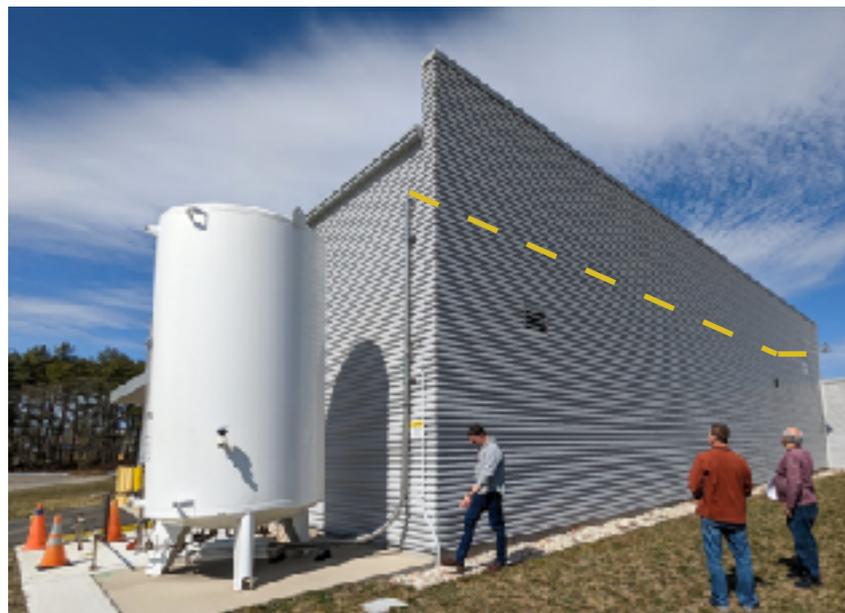
Lab Safety and Space Management

- COVID level in Suffolk County is in LOW
- Face masks are optional onsite at BNL
- Annual lab EMS Assessment today to Building 510 today 1 pm-2:30 pm
 - Conducted with outside reviewers from other labs
 - Staff may be selected for an interview, I've been selected once previously
 - Please refer to Achim's ESH updates sent out on 03/24 for more information
- Lab cleaned up for the inspection



LN2 Plumbing into the HighBay

- Volodya arranged a lab NSLS BioMolecular Structure Lab with a recently built LN2 line for microscope stations
 - Very similar to our scenario in terms of scales, requirements, LN2 storage tank structure
 - An outside vendor made the measurement, design, and installation with a total cost of ~\$30k back in 2021. same as Cryofab's cost estimation of \$30k(manufacturing only)
 - Inquiring with the same vendor for an additional option besides, Cryofab.



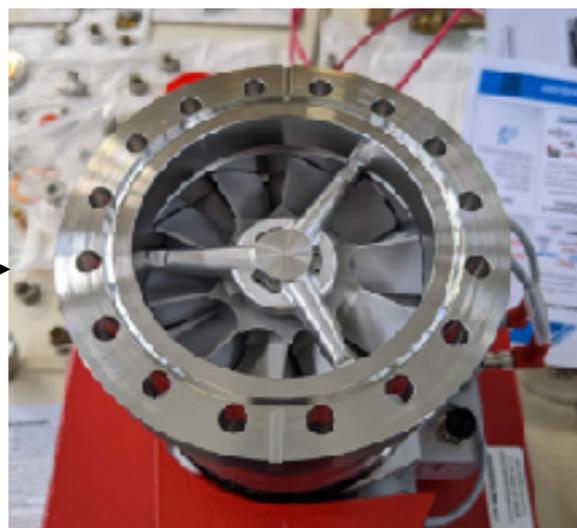
LN2 filling station at NSLS (in the experiment Hall)

New Vacuum Pump Setup

- New vacuum pump has been set up
 - Built a pumping station on a mobile base balanced with bricks
 - New pump has significantly larger turbine: Dia. 60 mm \rightarrow 100 mm with a higher pumping speed: 68 l/s \rightarrow 260 l/s
 - It can speed up the pumping-down process
 - Vacuum plumbings moved to the new pumping station
 - Swapped with the old pumping station
 - Leak checking the new plumbing now



Old



New



4



Old



New

Gas Analyzer Repair

- New HD for the H2O replaced
 - It was more difficult than expected due to the design
 - The over 60lb analyzer has to be removed from the crate
 - The plumbing has to be disconnected at the back
 - New HD is in and the analyzer is running stably now
 - Leak checking together with the new vacuum pump



Gas Analyzer Repair

- **New Pfeiffer leak detector ordered**
 - 5 times pumping speed than the one we borrow from electronics
 - The quote is ~\$23,680
 - Currently in progress of post on governmental procurement site for bidding for 5 days(New requirement by Buy American bill)
 - Expected in ~6 weeks
- **Burst disk production**
 - Factory is finalizing the engineering design for production, expected the quote by next week
- **Hotter getter cartridge**
 - Quote inquired with the SAEs
- **Vacuum plumbing parts for system upgrade**
 - Ordered with multiple vendors on CC
- **Mass flow meters**
 - Inquiring with Omega and MKS technical support for product in compliance with our needs