

LAr R&D Progress Report

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1/23/24



Lab Safety and Space Management

- COVID-19 hospital admissions level at Suffolk County: HIGH, hospitalization 100k in the past week: 22.7
 - Face mask is again REQUIRED onsite at BNL
- Robotic chip testing station electrical safety review
 - The robotic testing station is in the corner room of highbay
 - An EPSON robotic arm is set up for DUNE chip testing
 - The review went through the setup and ESR content
 - Peter, Joel, Achim, Volodya(experimental specific ECP), and me (ECP for EDG group) attended
 - LN2 plumbing site survey by the vendor is still pending



Preparation for the next purity run

- LAr plumbing for the filling
 - Two bottles of LAr was connected to fill with a Tee
 - One LAr tank level is very low, one more tank of LAr ordered
 - A particulate filter was installed on downstream of the inline filter to remove the black powder observed in the last run
 - Next is to leak check the new connections



Preparation for the next purity run

- Particulate filter cryogenic test
 - 7 um particulate filter with a replaceable cartridge will be added to the fill line to remove the known powder from the inline filter
 - The cartridge is replaceable and made in SS
 - A quick cryogenic test was conducted using LN2 to check the impact on the flow rate
 - The percolate filter has a limited impact on the cryogen flow rate at 22 psi, our filling pressure is ~40-50 psi, can be helpful for pressure regulating in the main dewar during filling

