

260-L LAr System Progress Updates

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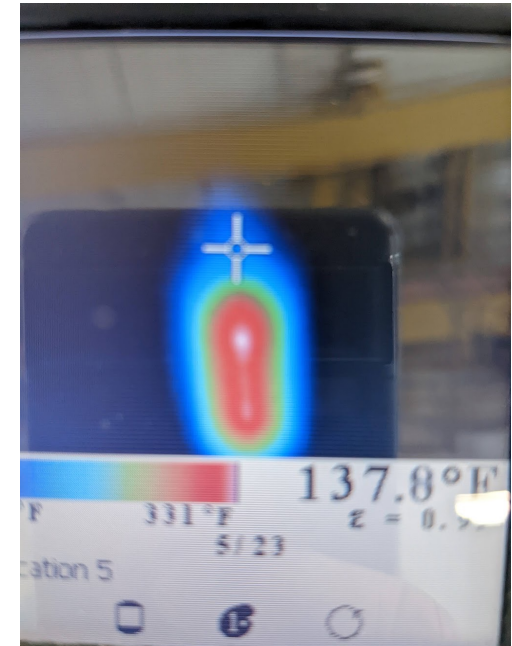
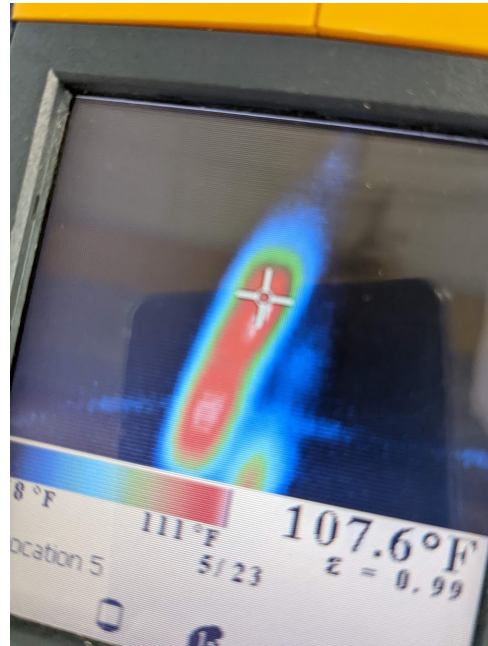
Lab Safety and Space Management

- COVID level in Suffolk County is MEDIUM now
- Face masks are optional onsite at BNL
- CRP lifting structure has been approved



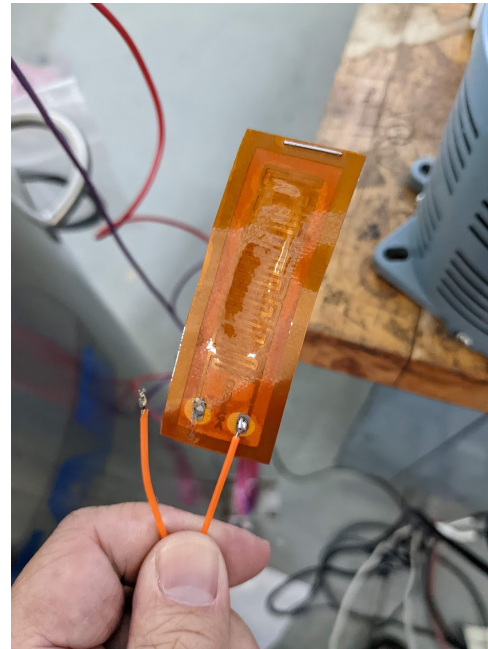
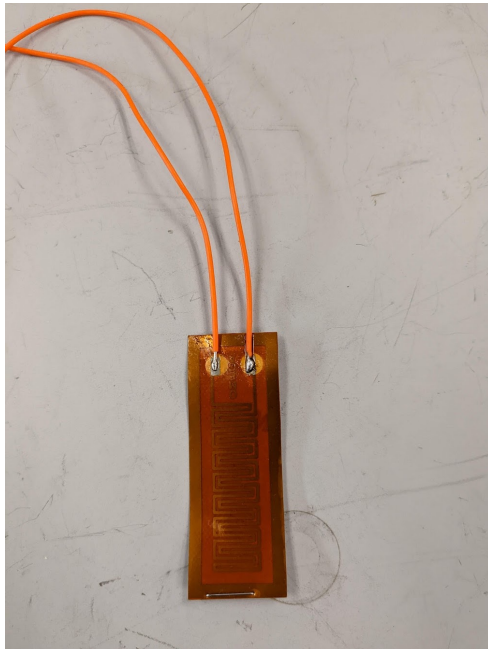
LAr Heater test

- Tried with both cartridge and Kapton thin film heater
- Cartridge Heater works fine in LN2 with restrain power <100W
- Thin film heater works in heating but soldering failed
 - Smoke observed in the air with material discharge in the package
 - Vendor confirmed no outgassing control of materials in cold



LAr Heater test

- Thin Film heater has significant change after heating and cold cycle
- Not an ideal choice for our system



Preparation for the next run

- Gas analyzer question to Servomex
 - Managed to connect to their North America Manager Kara Benoit by phone
 - She promised an answer from the technician this week
- Burst Disk Customization
 - Rembe is generating a quote and sketch design
 - A 10^{-8} mBar-l/s can be achieved with their burst disk with Conflat Flange fittings
- Modification to the filling line
 - Delayed due to tech schedule
 - Secured time with our tech to work on the plumbing tomorrow
- Question about filter powered
 - Wrote to Terry Tope, such powder is not unexpected
 - Getting the filter specs from Fritz who is in charge now

Preparation for the next run

- Plan to put the PrM in the system for the next run
 - This week: Plumbing for the inline filter
 - Filling line plumbing
 - Plumbing reserved for the new burst disk
 - Ordering parts for the flexible hose, gas supply for cryogenic operations
 - 2nd week: Install the PrM monitor to the top flange
 - Mechanical mount to the top flange
 - Cabling and wire connection
 - Bench test for electronics performance, noise etc.
 - Heater Design
 - Ordering new vacuum pump
 - 3rd Week: Preparing for filling
 - Finish the inline filter plumbing with the new fill line
 - Clean up the main dewar
 - Order LAr
 - 4th Week: Regeneration of the inline filter
 - The burst disk replacement would require quick fitting change with positive pressure
 - The filter is consumed in previous test
 - 5th Week: Re-assembly of the system
 - Move top flange back to the main dewar
 - Reconnecting the plumbing
 - Slow control monitoring reconnection and test
 - Leak check the system
 - DAQ tuning

