LAr R&D Progress Report

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6/4/24

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Lab Safety and Space Management

- **High bay ceiling lamp repair**
  - The work is expected to start today
  - Delayed due to electrician supervisor occupied by other task
  - Will start with our end first to accommodate for the visiting journalist on Friday
- **Planned electrical power outage Bldg 510**
  - Received a notice of power outage of the Bldg 510 including highbay lab this week
  - Short period power outage, ~ 10 mins, expected due to switch to another panel
  - 260-L system should be able to survive from the outage
  - The work is planned for Sunday, I will come to the lab to make sure the continue of our cryogenic operation

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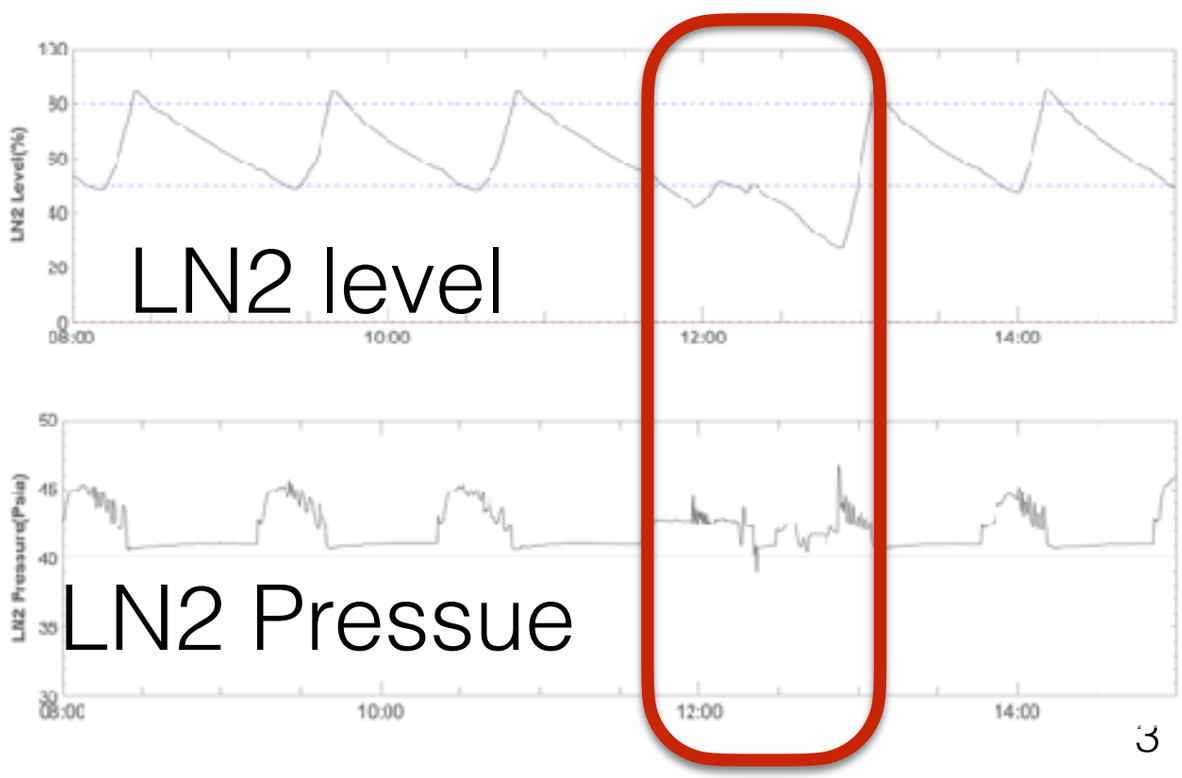
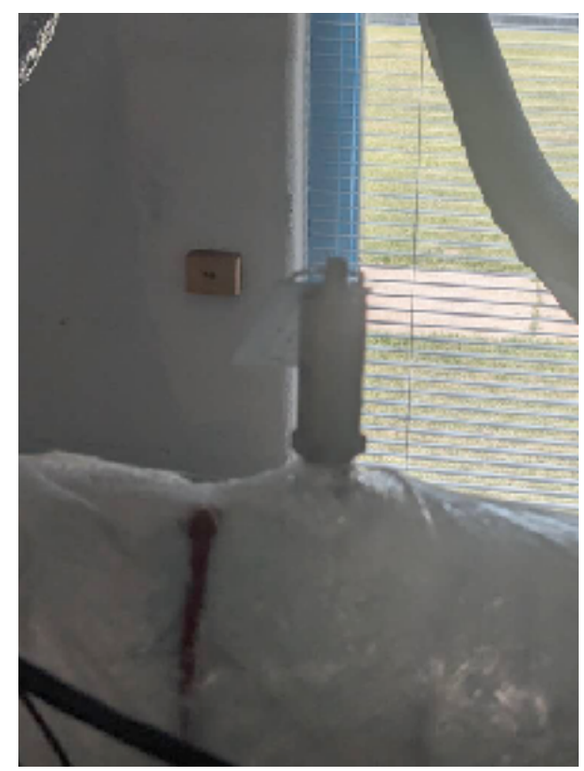
260L LAr System Cryogenic Operation Status

- **It has been over 2 months since the beginning of the operation**
- **No LAr loss so far**
- **The cryogenic operation is overall very smooth**
  - Just had an major incident yesterday around noon time
  - LN2 level keep dropping after switch to a full supply tank, even with pressure increased to the maximum of 50 psi
  - It shows a clog on the LN2 filling line, most likely caused by ice formed with accumulated moisture from the air during long time cryogenic operation
  - Thanks for Milind's suggestion, manually popped the relief flushing out LN2 resolved the issue





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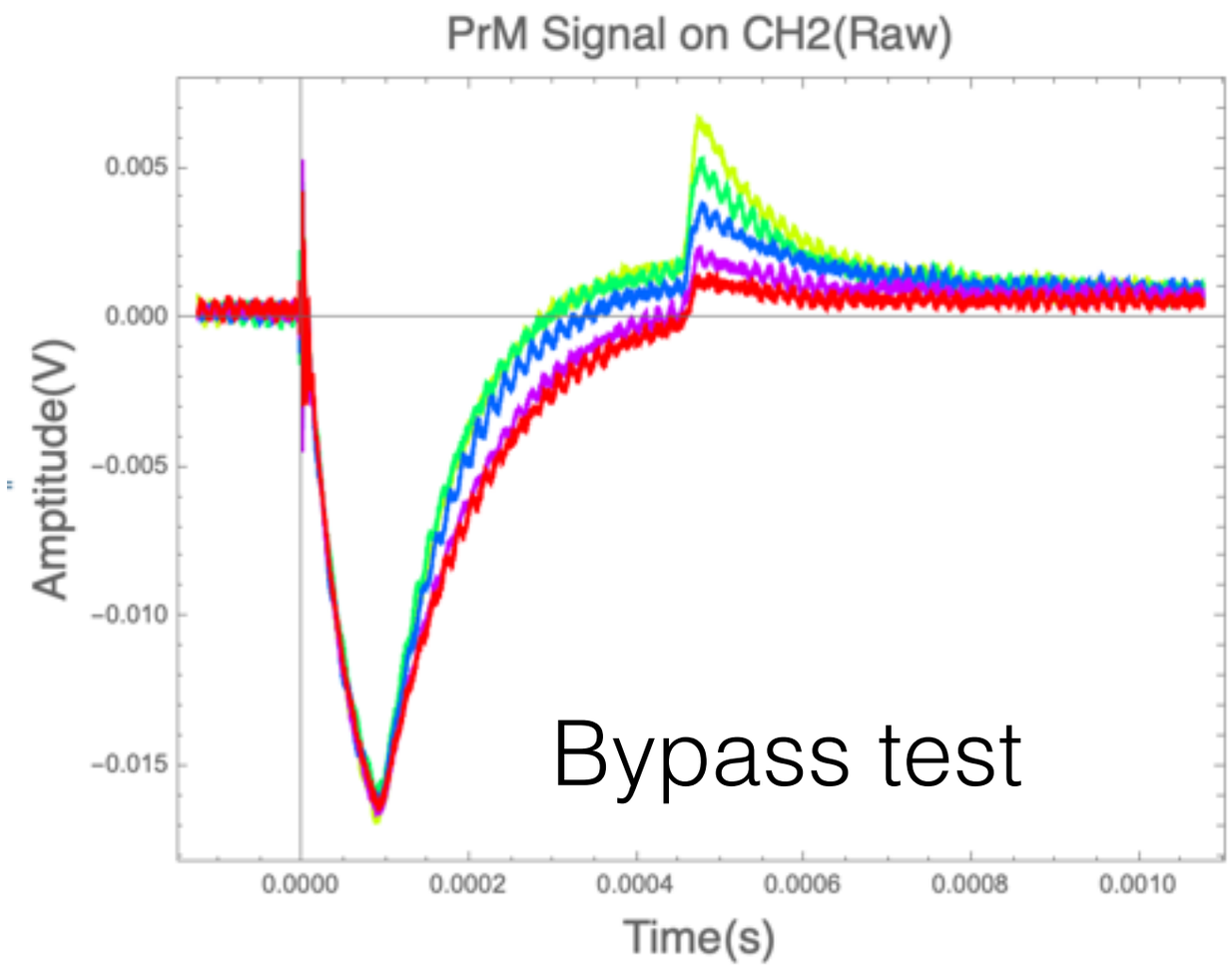
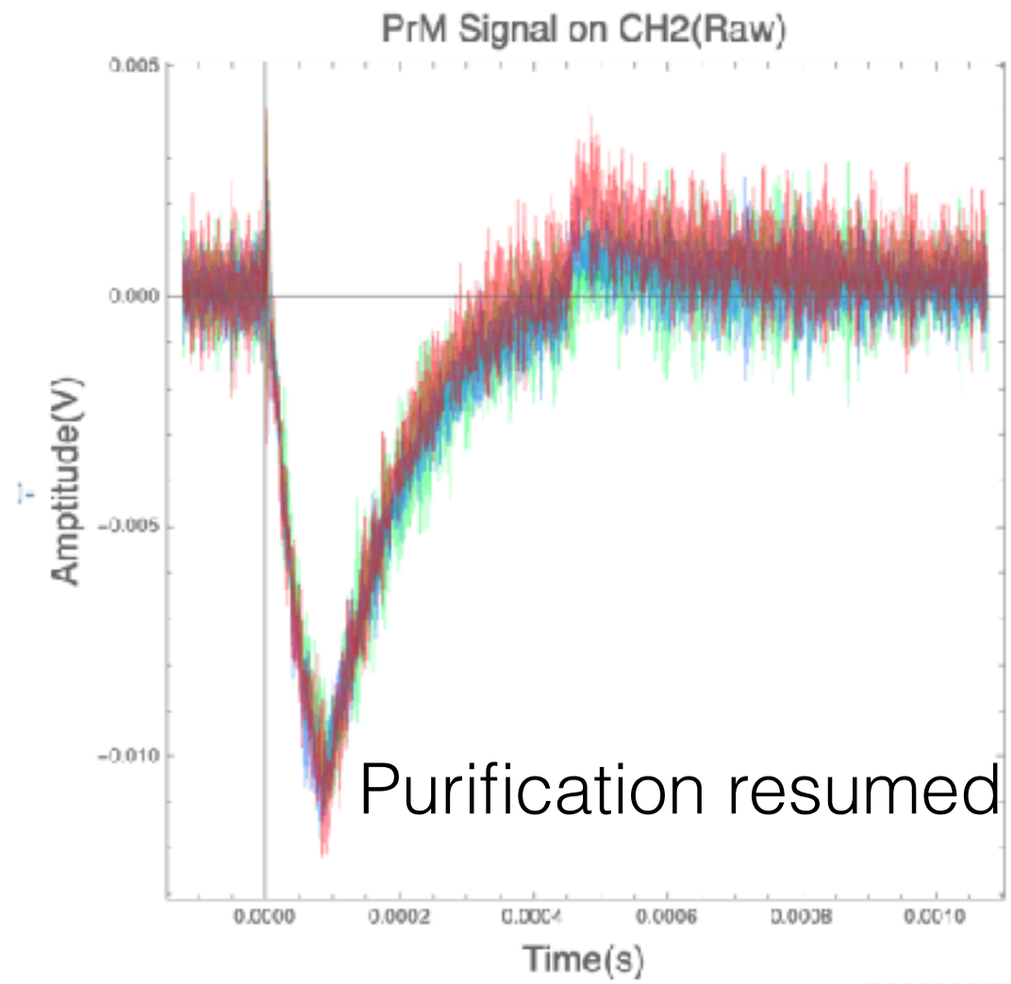
Purification bypass test

- **The purification turned back on 05/29**
  - PrM signal turned more noisy on 05/30, with a high frequency noise from the the electronics box
  - Tried to fix, but did not see any improvement yet
  - Still can observe the improvement of the electron lifetime with time after averaging
  - Coordinate with Jianming for replacement and repair





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Running Plan

- Continue with the purification ON this week, 6/7
- Switch back to the purification OFF next week, 6/14
- Sampling during to the Directly sample LAr to get the N2 concentration to confirm the system is ready for light measurement, 6/21
- Warm up the system, 6/28

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