

LAr R&D Progress Report

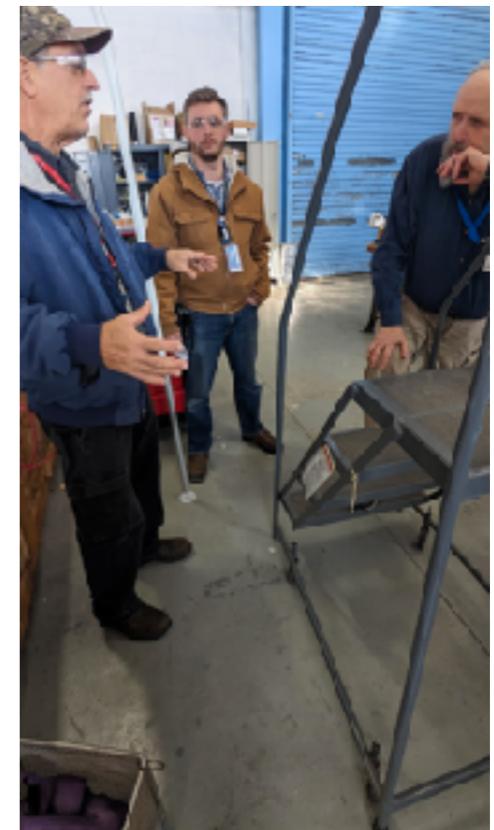
Yichen, Jay, Sergey, Steve

12/5/23



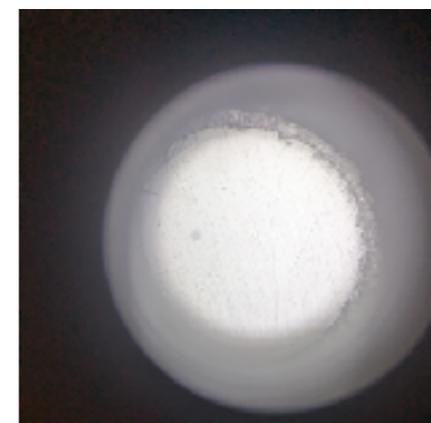
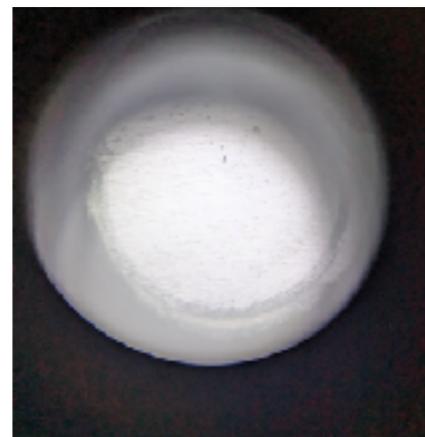
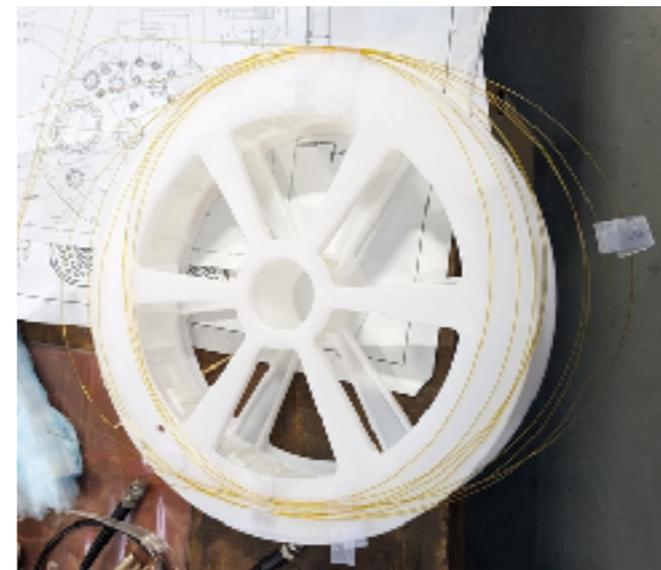
Lab Safety and Space Management

- High Bay End room cleanup
 - The room was clean up with swiping and vacuum
 - RTS was delivered this morning
- LN2 plumbing with Techinfab
 - SOW approved internally
 - The design contract is expected to be dispatched to the vendor soon
- ESR walkthru
 - Achim, Mike Gaffney, and Peter attended
 - Briefly go over the system, need complaints or concerns
 - ESR document minor revision in progress, expected to complete this week



PrM Commissioning for the next run

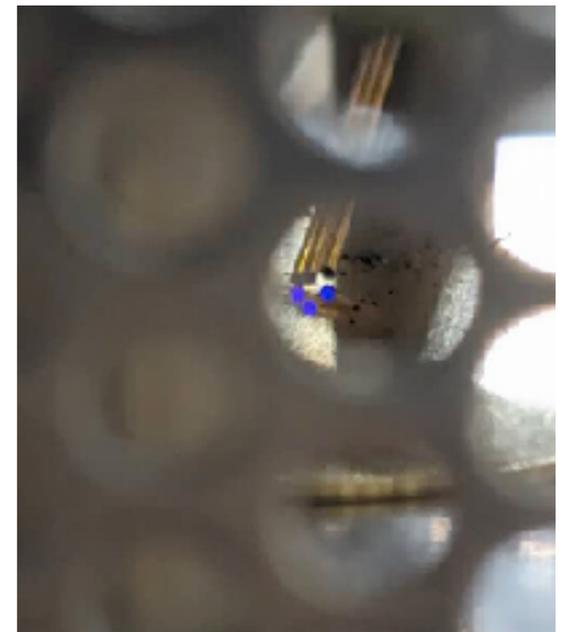
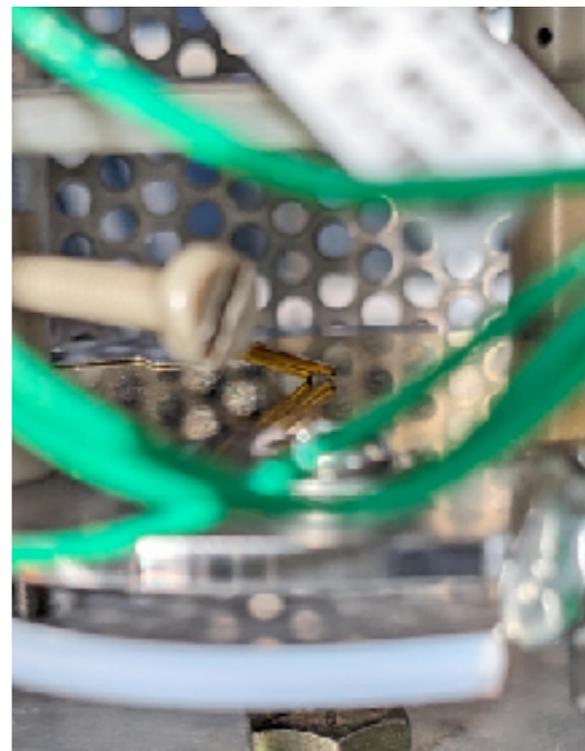
- ▶ **600 um optical fiber preparation at IO**
 - 3x 10 ft 600 um optical fibers were made
 - All 6 interfaces polished to a good finish
 - Fiber polishing experience summarized to a simple SOP
 - Used up all the 3 um fine fiber polishing film



Optical fiber installation

▶ Fiber installation to the top flange

- All 3x fibers installed to the top flange through the compression fitting feedthrough
- The fibers were fed to the photocathode
- Test with Xenon with light illumination to the photocathode
- The fibers outside the dewar were properly secured with tape to the surface of the purifier insulation to avoid damage
 - It was found the fiber was most likely damaged in the last run by the interference with the lifting sling when fiber was put flat on the top flange with small bending radius



Top Flange Assembly

▶ **Top flange assembly**

- The surfaces were thoroughly cleaned up with alcohol
- The top flange moved back to dewar
- The crane lifting operation was smooth
- The system has been leak-checked and under pumping



PrM test in vacuum

- ▶ **PrM test in vacuum in progress**
 - Moving vacuum pump accidentally disconnected the power plug, changed the power supply cord arrangement to avoid future occurrence, re-evacuating the system
 - Connecting the electronics and opticals

