

LAr R&D Progress Updates

Yichen

11/4/25



Lab Safety and Space Management

▸ EEI inspection

- ePIC Barrel HCal Electronics Rack Inspection (COMPLETE)
- Xenon lamp (COMPLETE)
- Vacuum inspection (TO BE DONE)

▸ LN2 delivery

- 6000-gallon refill in progress, waiting for quote from Airgas
 - The entire supply team including corporation and local manager changed
- Inquiry for more portable dewars
 - Airgas is no longer able to provide rental/loaner, we have to purchase the dewars
 - Waiting for the quote for 5 dewars, my estimation is ~12k USD



pTP coating progress

► Updates from LaserFiberOptics

- Better resolution photos for the paper(Updated in the overleaf project)
- The last batch is expected next week by Nov. 11
- Setup for heating test
 - Yimin used a heating plate under a range hood at his lab
 - We have the same setup at Chemistry
 - Coordinating with Sasmit for the test
- Cover for the test
 - The measurement needs a cover plate
 - We don't have blank B33 substrate with the 143.5x143.5mm size
 - Yimin suggested we could produce one by heating up above 200C, but that would sacrifice one sample
 - Instead, I required for a piece from Yimin. Tracking shows delivered to the lab, should arrive at stock room tomorrow



Plan for heating measurement

- Substrate measurement before heating
 - Chose 3 substrates with the worst uniformity (TBD)
 - Measure the spectrum and thickness with profilometer and spectrometer
- Heating test
 - Heating test at Chemistry Lab under a hood
 - Heating up to 170C and holding the temperature for 1 mins, no protection atmosphere needed
 - Natural cooling to room temperature
- Substrate measurement after heating
 - Repeat the spectrum and thickness measurement to access the changes
- Expected to finish before 11/11, the expected arrival date of the new samples
- The results would determine if we include the content in the paper