

LAr R&D Progress Updates

Yichen, Milind, Aleksey, Steve

1/21/25



Lab Safety and Space Management

▶ Slipper Conditions on the ground outside highbay

- Some area has black ice formation, outside the rolling door over the long weekend
- Warning sign set up
- Tried to shovel but it iced up. De-icer applied
- Please be very careful when passing the area

▶ EEI Inspector JPM

- Joel found a task with an electrical rack connected to the building
- The qualification for EEI inspector should be done this Week

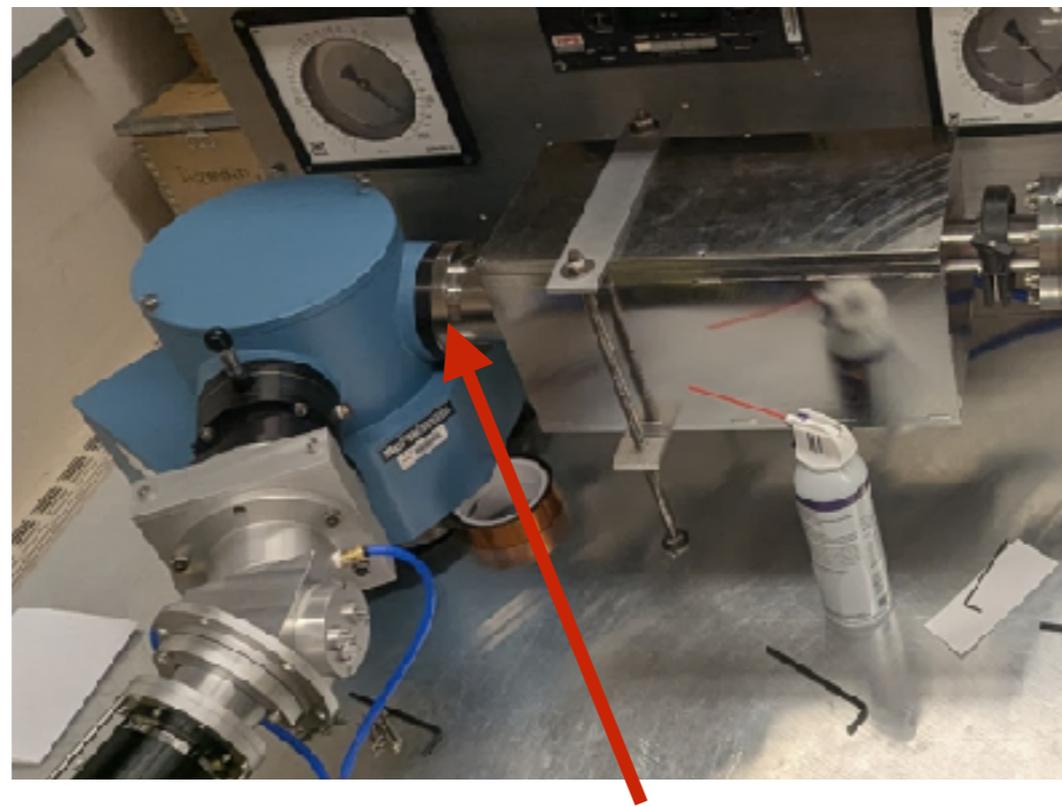
▶ CERN ODH incident

- An ODH incident occurred at CERN LAr R&D facility
- Don't know the details yet, BNL Safety is aware of the incident
- Double checked highbay ODH calculation, we are still an ODH 0 area with current operation model, given no cryogenic operation on CRP cold box.



Spectrometer Refurbishment

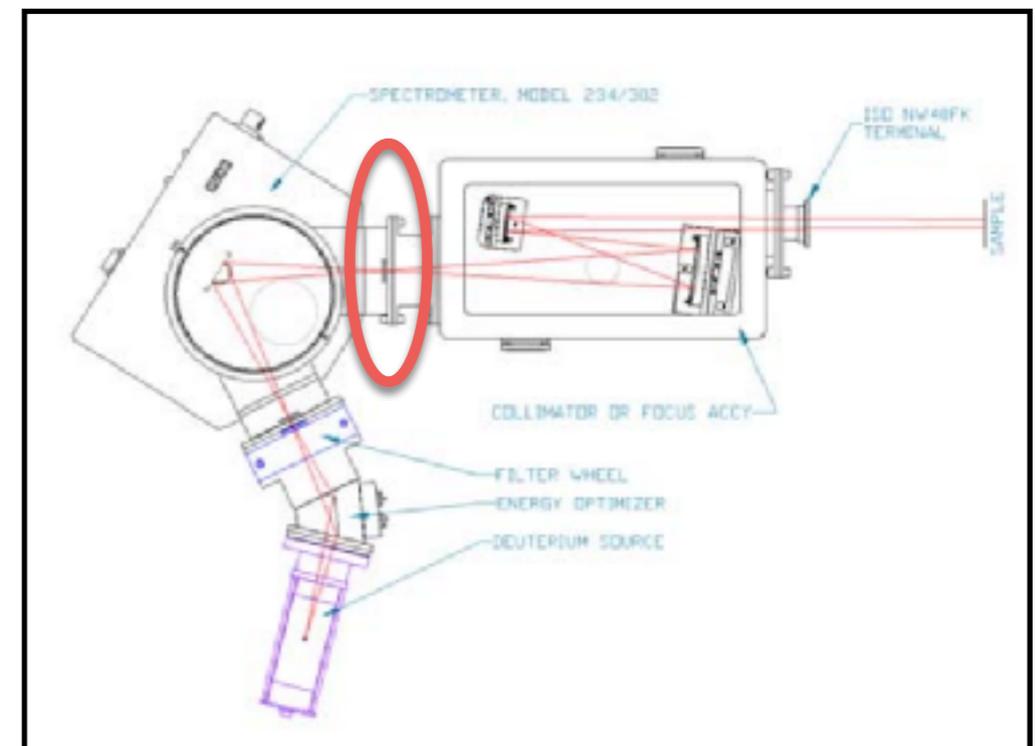
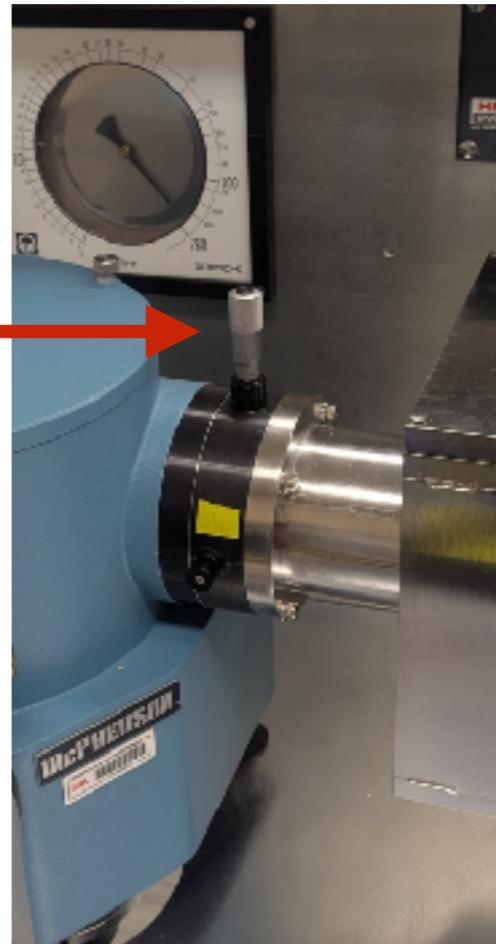
- ▶ **To do list(From last meeting)**
 - Replace the selection slit—>Done
 - Validation of the wavelength—>Thomas agrees to lend the spectrometer
 - Will borrow a spectrometer to confirm/calibrate the wavelength



Selection slit

Spectrometer Refurbishment

- The wavelength selection slit at the output of the spectrometer/ entrance to the collimator was not fully responsive
- A replacement was found in stock and replaced
- Now the output light spot after collimator is more closer a square shape
- Re-alignment is needed as the collimator has been taken off to put in the slit



Spectrometer Refurbishment

- Given the re-alignment is needed anyway. It is a good time to replace the mirrors in the collimators, which were not replaced yet because we'd like to check the Deuterium lamp and grating performance first
- After all optical parts replacement, we are going to conduct a confirmation measurement to ensure the accurate wave selection controlled by the driven motor on the spectrometer
- We need direct wavelength measurement to confirm the wavelength selection
- Contacted with Thomas and he agrees with lending the USB400 spectrometer for the calibration
- The spectral range is 200-1100 nm, good for our needs
- Coordinating with Bob to conduct the measurement
- I have used the spectrometer USB400

