

# LAr R&D Technical Meeting

Yichen, Milind, Aleksey, Steve

10/8/24



# Lab Safety and Space Management

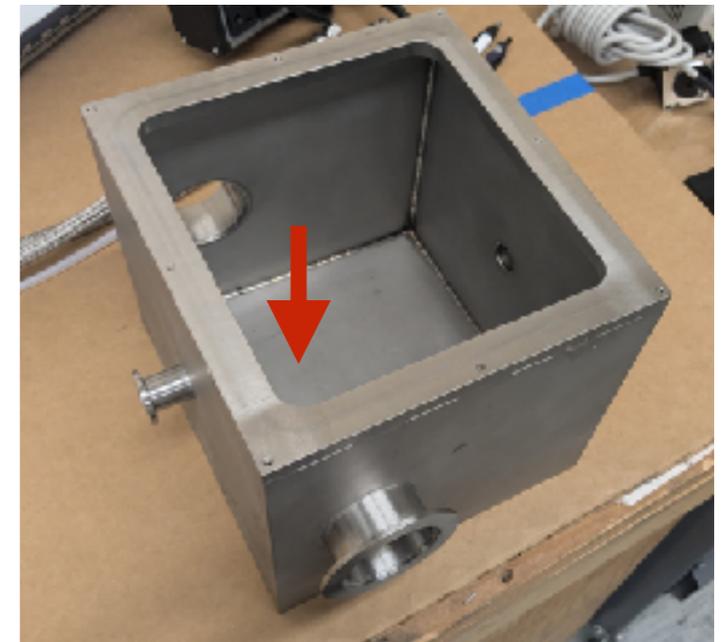
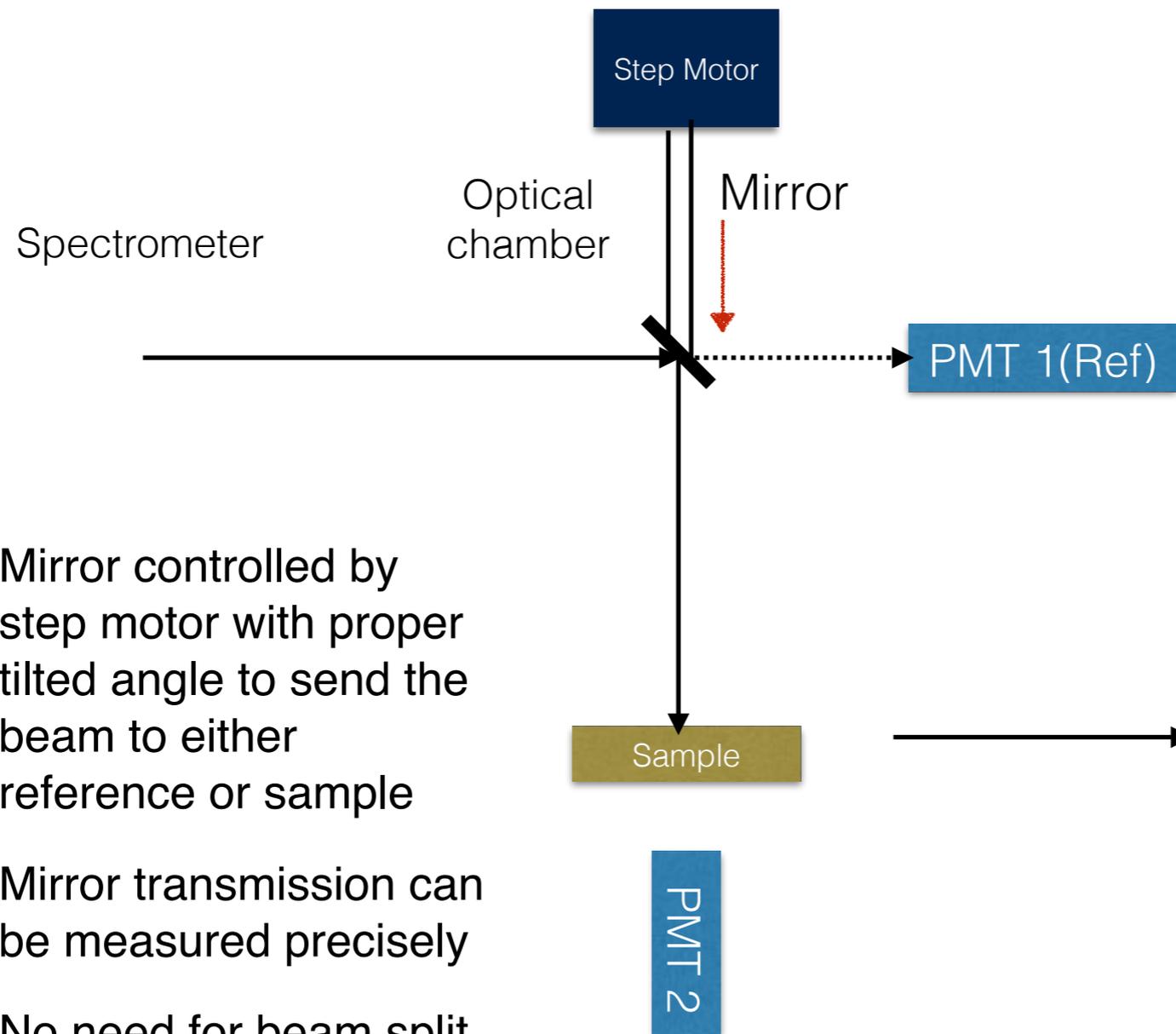
## ▶ **6000-gallon LN2 tank plumbing**

- There seems to be problems to get the support from the project to proceed
- Once the robotic testing station cryogenic test starts, there seems to be conflicts on sharing dewar
- Need to get more LN2 dewars if no plumbing



# Spectrometer refurbishment

- Mechanical modeling of the full setup
  - Had a discussion with Bob about the optical setup on modification to the optical box
  - Adding a NW50 port at the bottom of current box and also a gas port

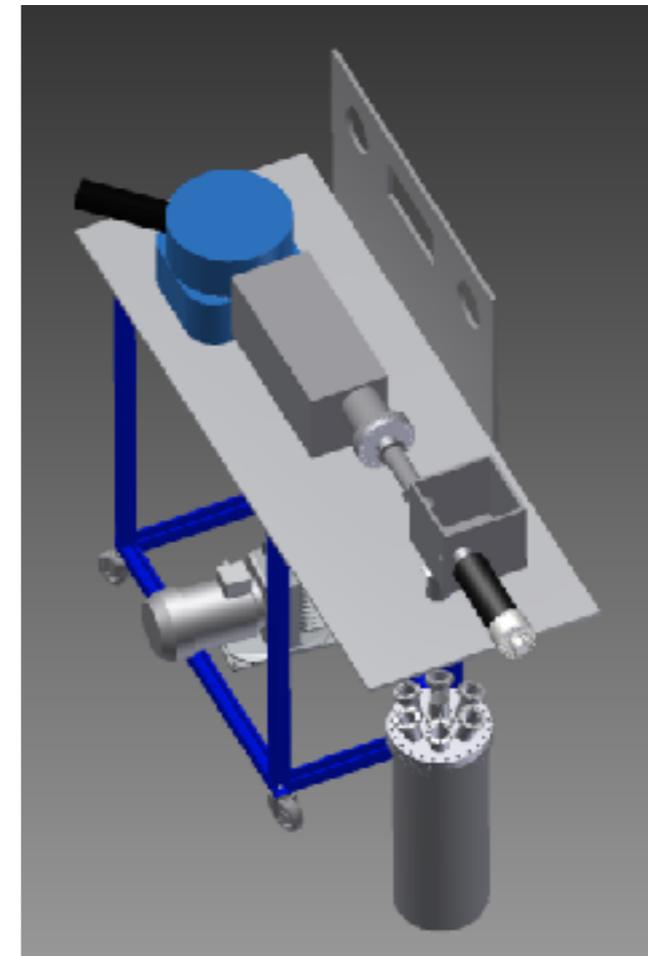
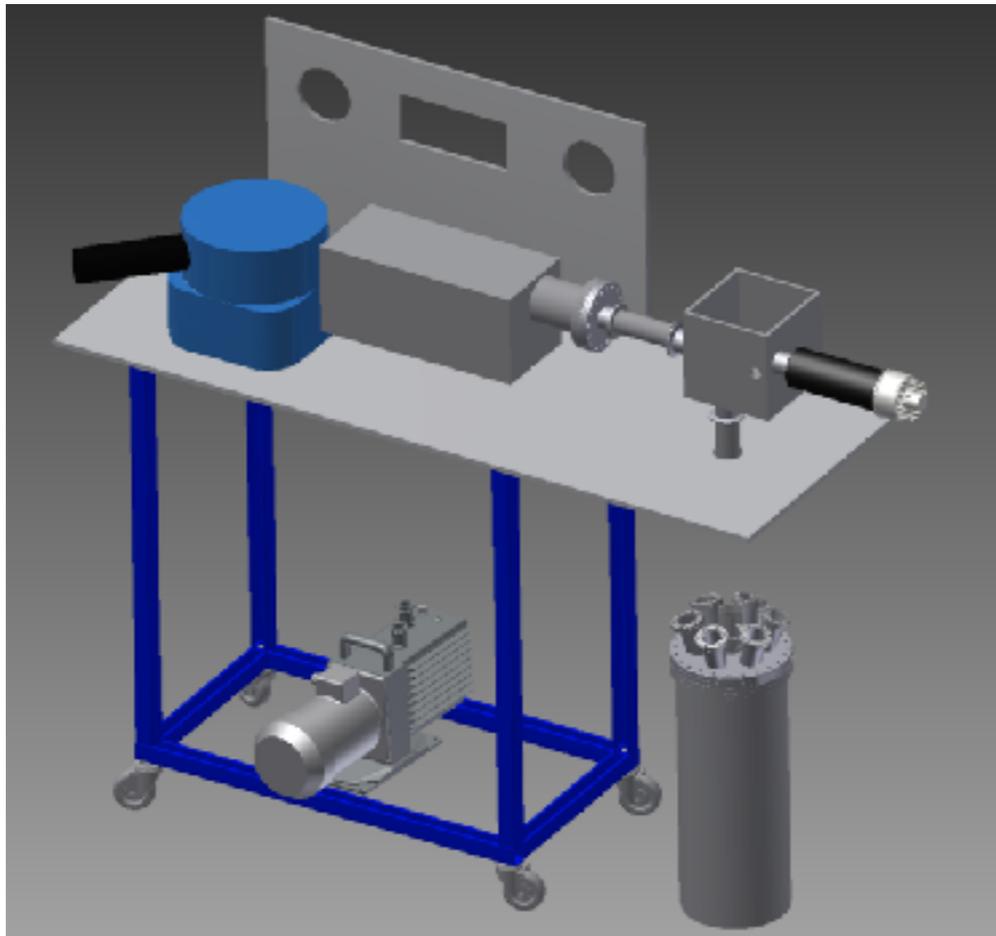


- Mirror controlled by step motor with proper tilted angle to send the beam to either reference or sample
- Mirror transmission can be measured precisely
- No need for beam split

- Mirror controlled by step motor with proper tilted angle to send the beam to either reference or sample
- Change from rotational mirror move to transitional

# Spectrometer refurbishment

- Finished the preliminary mechanical design
- Need to add on more opening with KF50 flange on the optical chamber
- Will go over the design with Bill and Bob
- Need to finish the details of the optical entry tube with MgF2 windows



# To do list

## ▶ **Cryogenic PMT R11410-20A Base**

- Hamamatsu doesn't produce base for this PMT
- We need to build the base
- LZ and XENON experiment used this PMT, could be potential sources

## ▶ **Heater construction**

- One major addition to the next run

## ▶ **SiPM readout board for filter measurement**

- A board with readout of 12 SiPMs

## ▶ **PrM electronic box test**

- Will check with Jianming on how long we could keep the old one

## ▶ **Mechanical support underneath the flange in 260-L system for future measurement**

- Expected to be done with online manufactures

