

# LAr R&D Progress Updates

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6/10/25



# Lab Safety and Space Management

## ▸ Safety Month in June

- A series of safety events hosted by the lab
- <https://www.bnl.gov/newsroom/results.php?kw=safety>

## ▸ NaI Detector Moving

- We are loaning the NaI detector to UVA
- It requires a thorough radiation smear test before shipping out
- Moved the detector out of basement room to highbay
- Given it is very heavy ~0.5ton, just opened one side of the box
- Smear test has been conducted, initial result by G-M counter shows 0 readings, waiting for the counting results to complete



# PTP coating measurement

## ► Additional Samples from SBU

- Rado brought 1 more piece from SBU
  - Given #41 is no longer in use, #50 with the appropriate size was provided instead
- Our own high sensitivity spectrometer just arrived
  - Going to conduct comparison measurement with the same sample



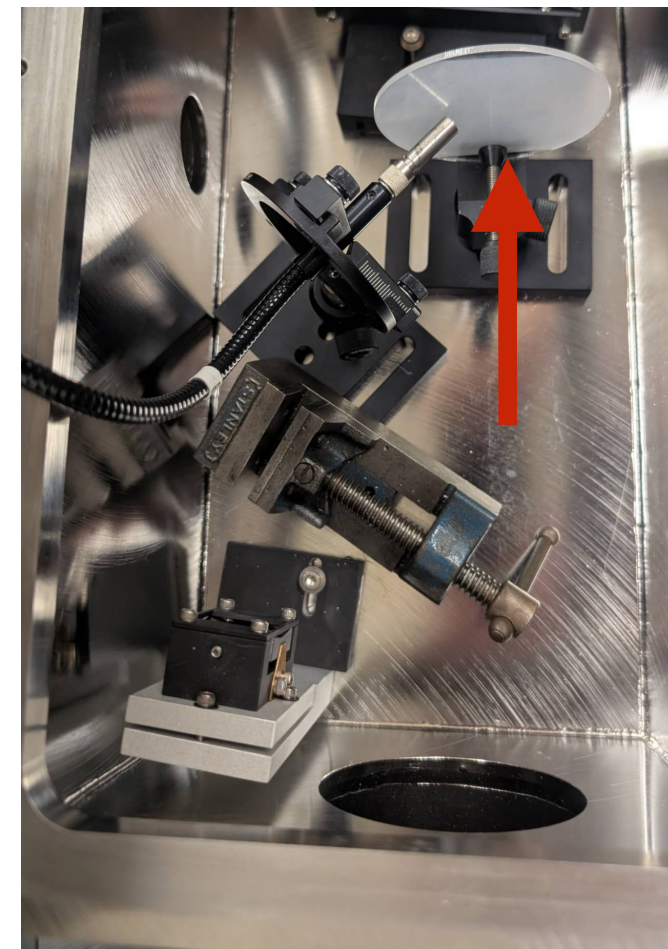


# PTP coating measurement

## ► Additional Samples from SBU

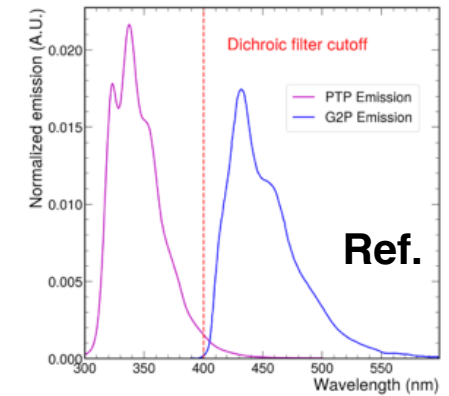
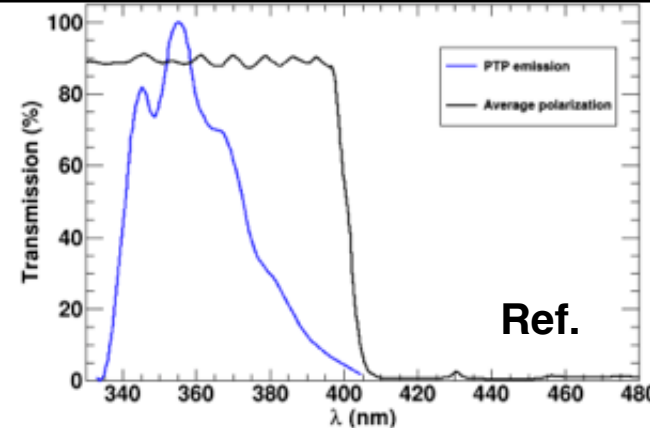
- Rado brought 1 more piece from SBU
  - Given #41 is no longer in use, #50 with the appropriate size was provided instead
  - All the samples have been measured in both transmission and reflection

Sample Name	Note
Quartz	from LaserFiberOptics
Sapphire	from LaserFiberOptics
B33	from LaserFiberOptics
Fnal	from Fermilab, used in VD
#41	From SBU
#50	From SBU



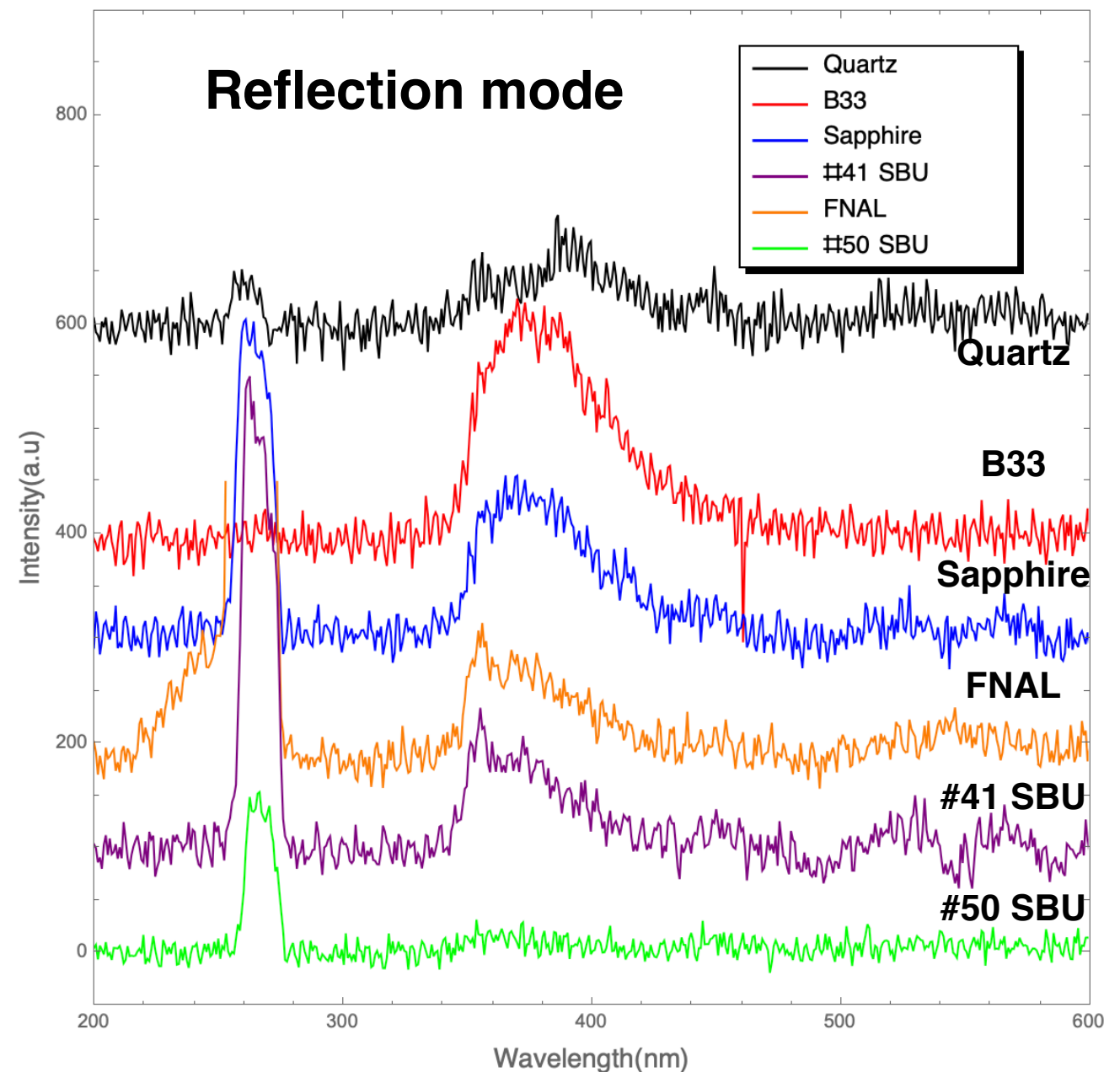
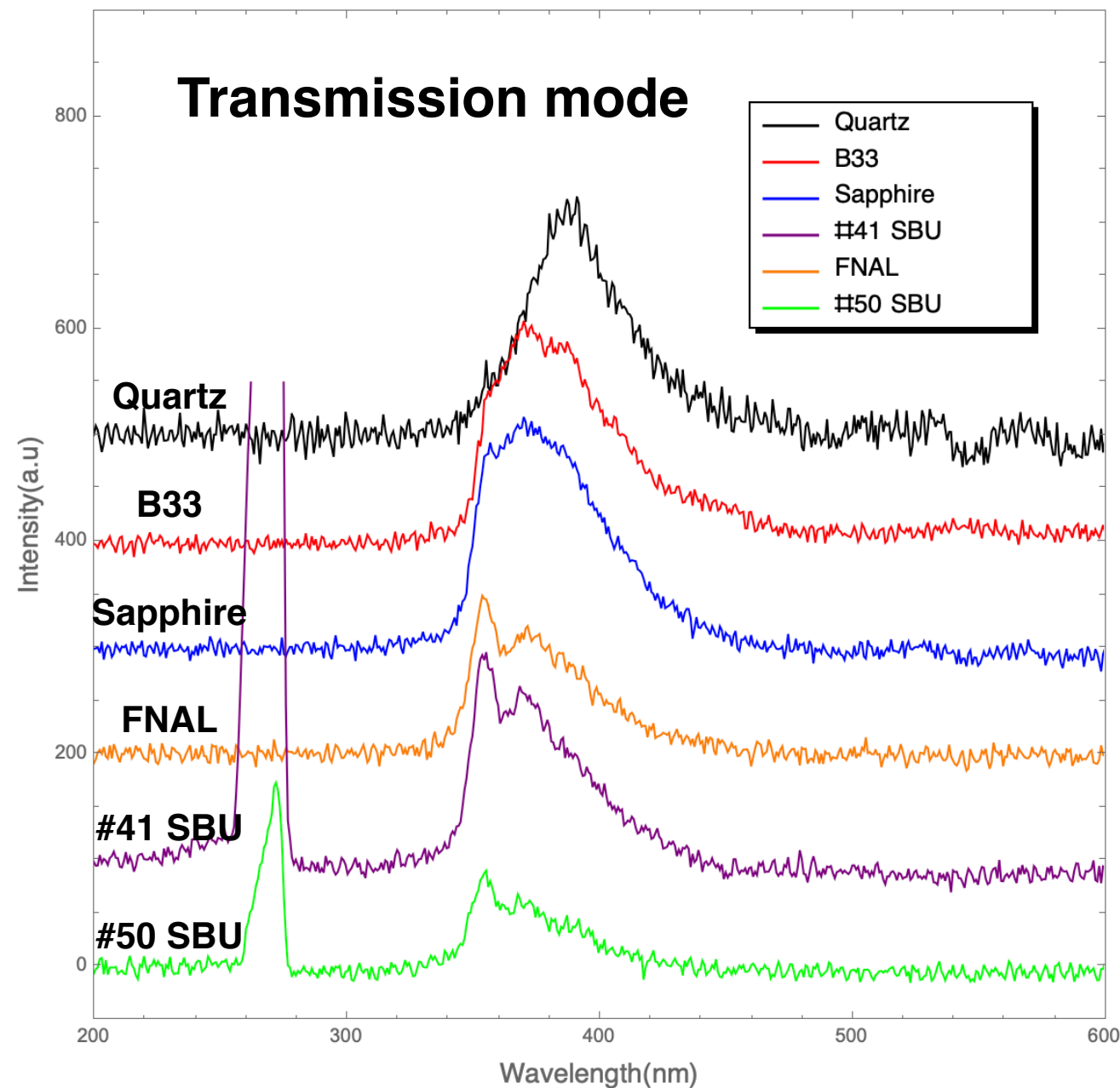
# PTP coating measurement

## ► Results for all samples



PTP sample emission spectrum

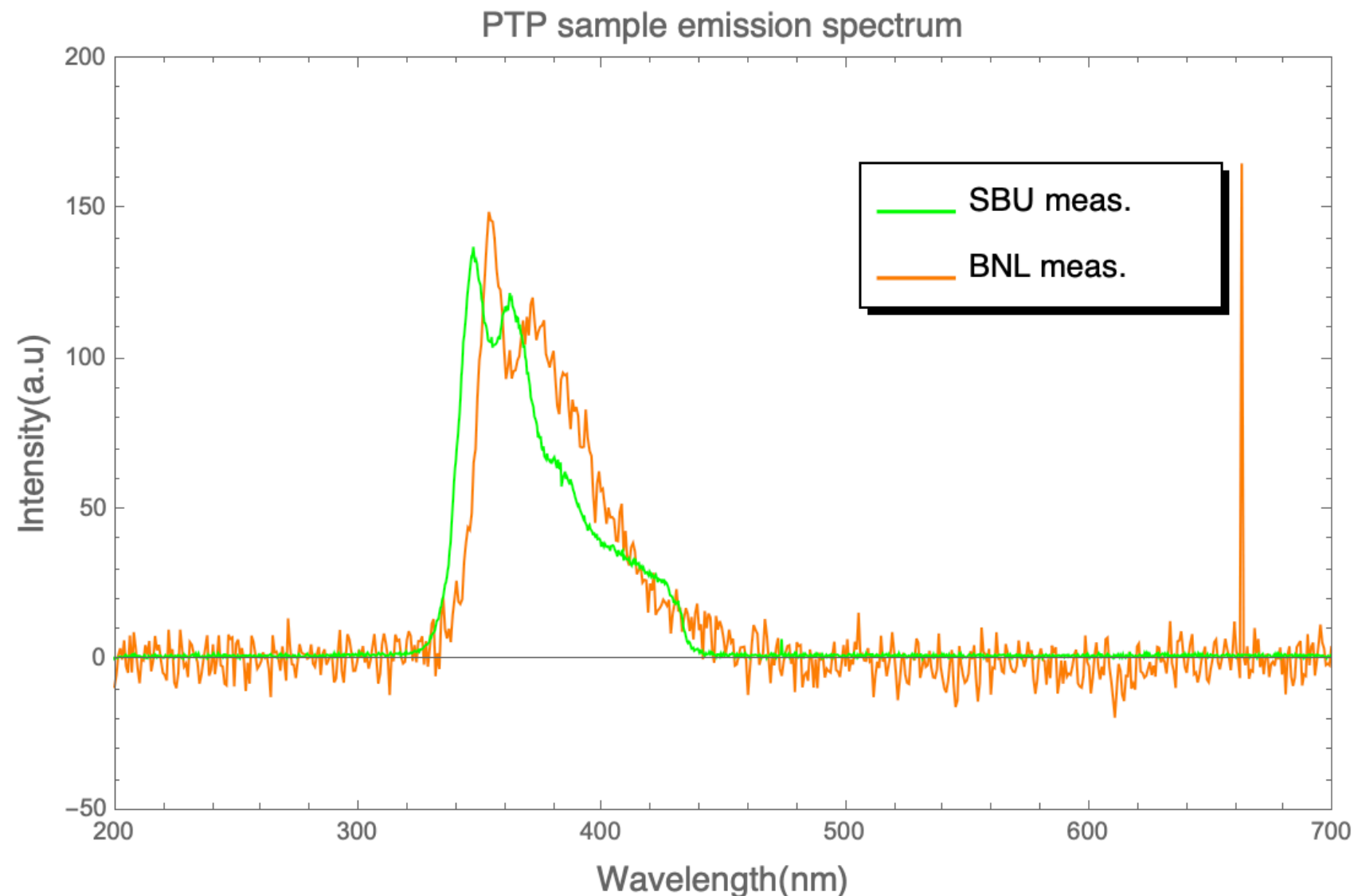
PTP sample emission spectrum



# PTP coating measurement

## ► Comparison to SBU measurement

- For the same Fermilab sample, there is some discrepancy at peak position
- Will repeat with our new spectrometer



# Other updates

## ▸ **Coating sample progress**

- Yimin is making good progress on the sample production
- Adjusting the coating parameters
- Most like the samples will be delivered on time by the end of the month

## ▸ **Diamond sample coating**

- The SiC wafers have be delivered to the vendor

## ▸ **High Sensitivity Spectrometer delivered**

- PS systems sent notice about delivery
- Locating the package