

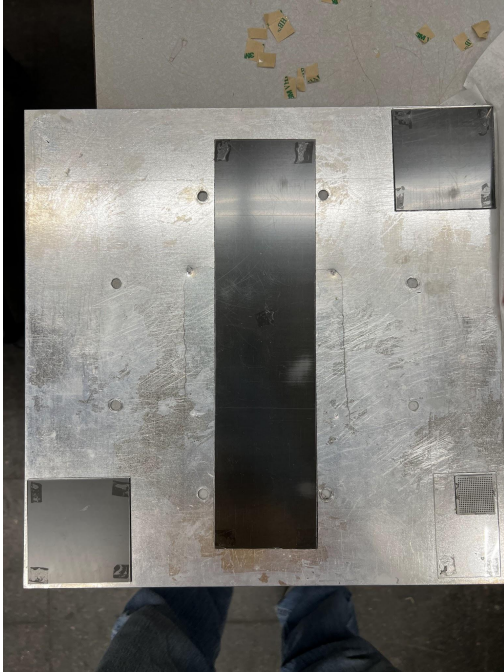
# Mirror reflectivity test for evaporation 10

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# Evaporation #10



## Samples:

- 7x7 #1
- 7x7 #2
- 7x28 long strip → *cut into 4 pieces after coating.*
- Depth measurement

## Coating:

- We think the vacuum status is really important, and we tried to reproduce our best performance (Evap #7), however, the deposition was more than we planned.

# Cutting the mirror (!)

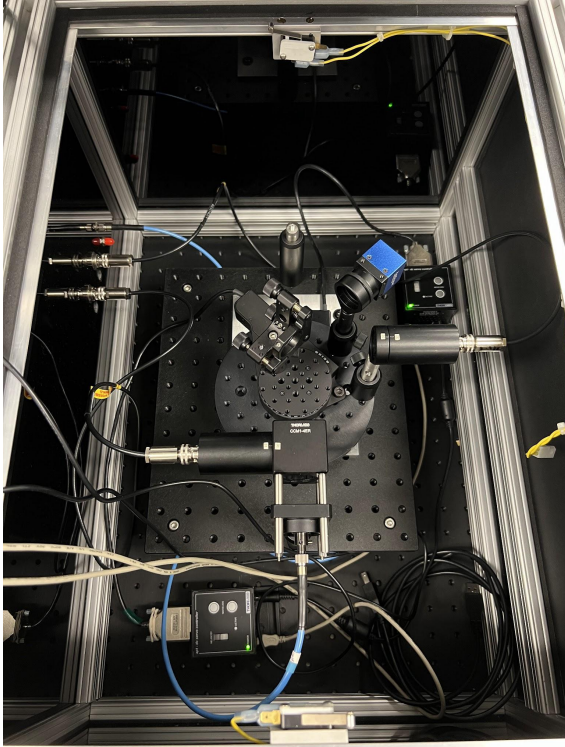


It went well.

The only thing we could improve is to not scratch the mirror feeding through the rail.

This coating is a little wavy as expected, we didn't glue it very hard. We will address this issue with another coating with the purdue sample.

# Reflectivity test at BNL

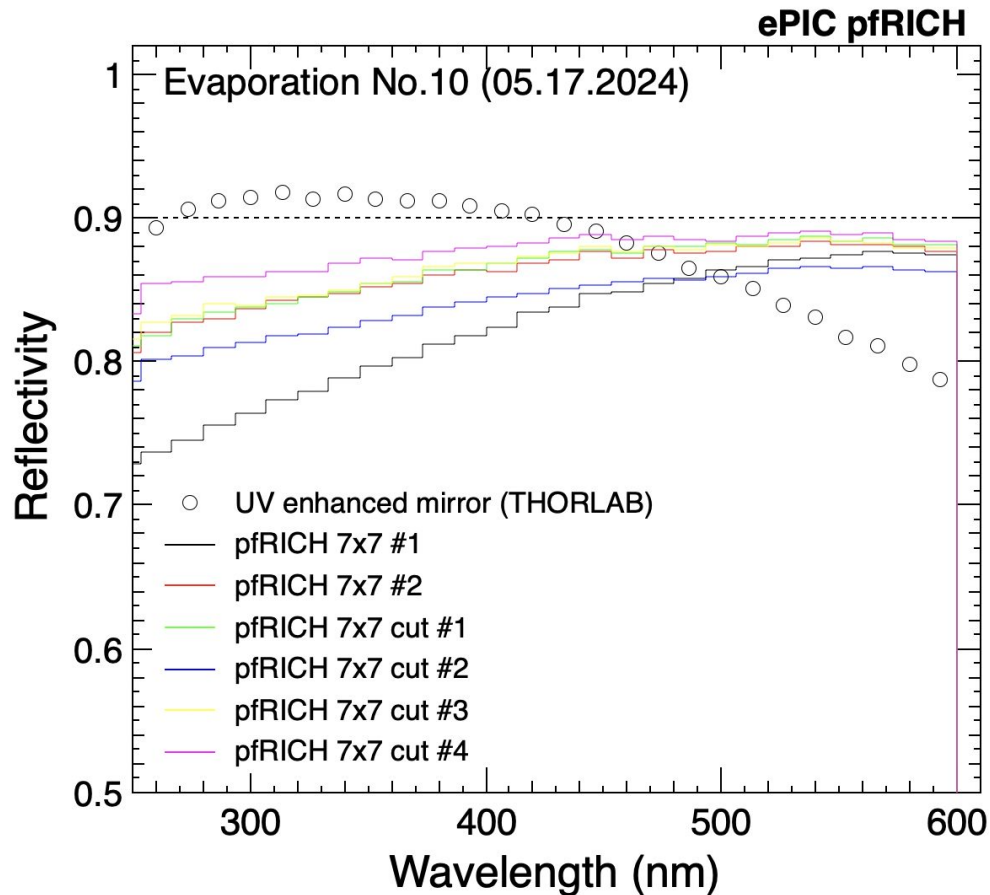


Everything moved in to the dark box, and first tuning done. The only thing we still need to do is the cabling, and feed them thru properly.

List of to-dos:

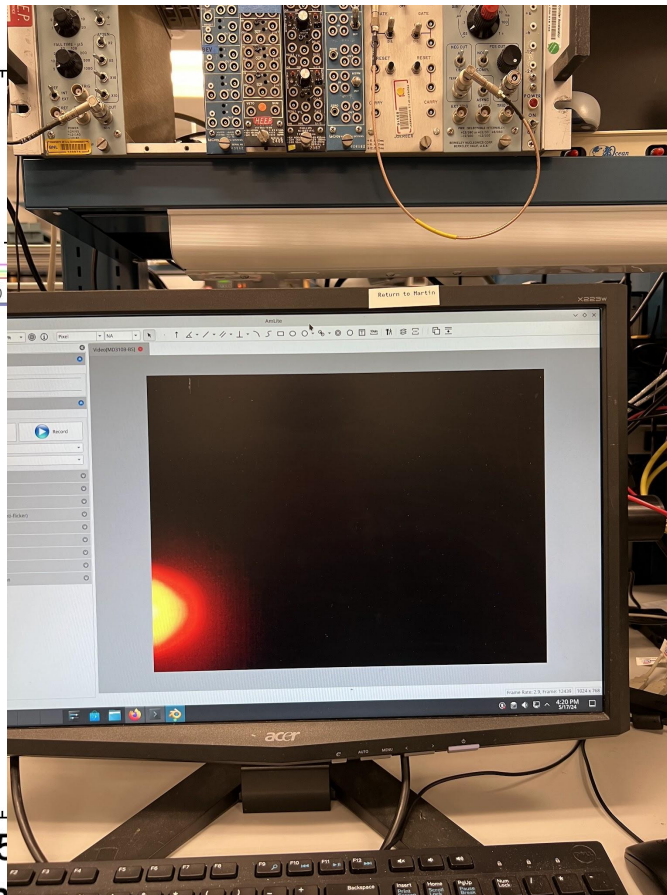
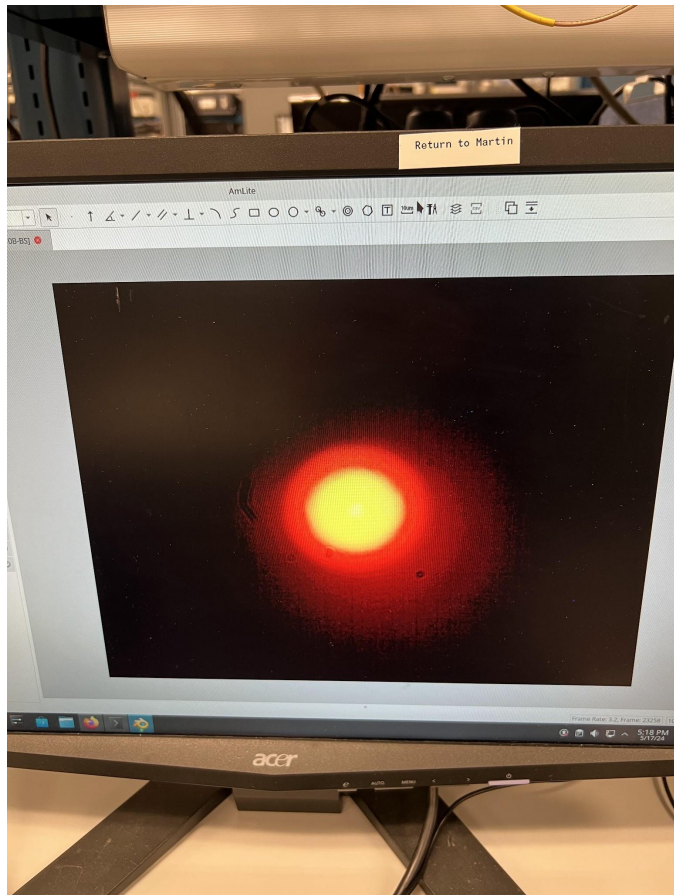
- Feed through cables and secure the control module of the translational stage.
- Purchase another fiber that has larger diameter to enhance the beam intensity.

# Results on the UV enhanced ref mirror and evaporation 10



- Our coating performances are expected due to a thicker aluminium (~20 kang, we targeted 10-12 kang).
- The uniformity of larger sample is not bad, but could still be investigated and improved.
- The lowest one, i don't know why it's more off than others.

# Results on the UV enhanced ref mirror and evaporation 10



wavelength (nm)

performances are to a thicker 20 kang, we (2 kang).  
y of larger sample is could still be and improved.  
ne, it's the mirror too big and beam (intentionally not

# Conclusions and plans

- We plan to do another coating for more accurate deposition for a thinner aluminium.
- We would like to ask Purdue to send us the latest epoxy bond sample (7x7) for this coating.
- We will do another 7x28 or even larger sample to further investigate the uniformity.
- Putting error bars on these measurements:-)..
- Mirror upgrades - Ion gun installation will start ~next week after coating.

