Mirror Update

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Upcoming:

- Based upon reflectivity results of Coating #20, we have **prepared 12 new SBU samples** to further refine the recipe.

- The change in height did have an impact on coating recipe but not as substantial as initially anticipated.

- Our planned **“micro-void” test did not seem very conclusive from coating #19** due to bonding issues, **we are following this up with new micro-void samples** (3 samples with a “picture frame” epoxy pattern and 3 typical SBU samples) in our coming Coating #21 (11/06) and Coating #22 (11/08)

- BNL Reflectivity Test Stand parts are steadily arriving, all McMaster Carr and AmScope parts are in our lab.

Coating #21:

- 3 samples for coating #21, shown on the right, have **~ 1cm x 1cm center of no epoxy**. These will be directly compared to the other 3 samples that are filled in our typical bonding process.

- Note the top right piece seems to have slightly more air bubbles and this is not abnormal for our pieces.

- The middle right “picture frame” piece aimed to have the **center half epoxied and half no epoxy.**

Ion Gun:

- The installation of the Ion Gun has progressed a substantial amount, currently it is **still being test benched.**

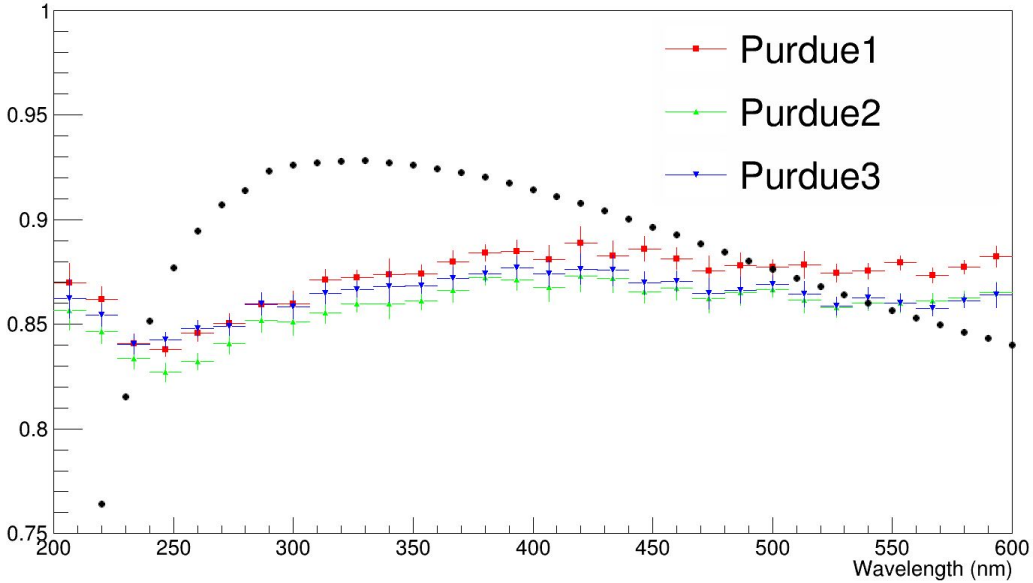
- All **vacuum side connections** have been identified and **are ready to be installed**.

    - Electrical atmospheric connections still require soldering / wire connectors but otherwise are accounted for.

    - Water - Gas atmospheric connections require some additional adaptations and swagelok parts.

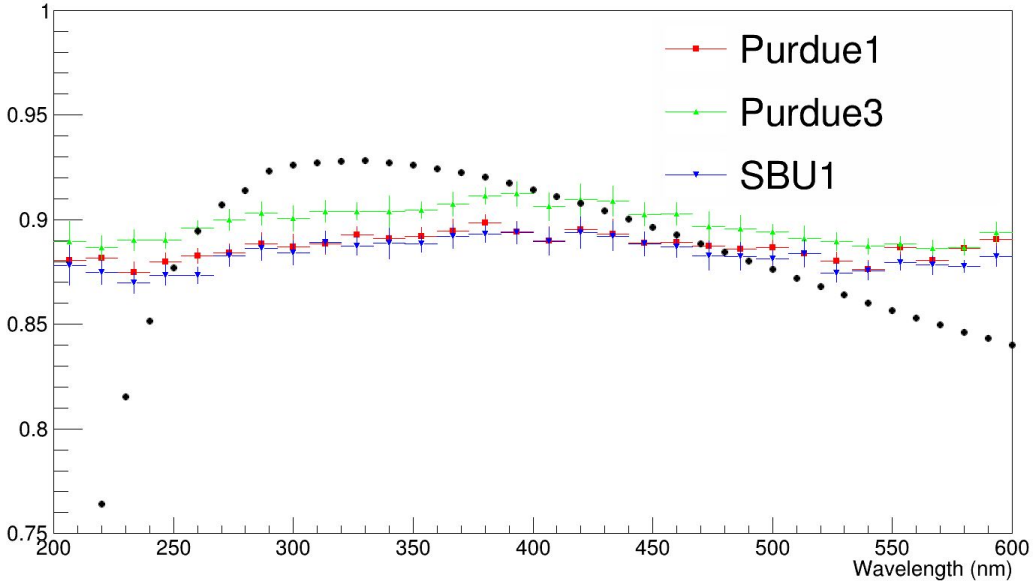
Sample 19

- All mirrors from sample 19



Sample 20

- All mirrors from sample 20



Evaporation Number	Relative Deposition Amount	Procedural Changes	Reflectivity
11	Cr: 5.08 KAng Al:12.36 KAng	Peak Reflectivity	89%
17	Cr: 9.98 KAng Al: 25.17 KAng	New Substrate Height Approximately Double Recipe	83%
18	Cr: 9.88 KAng Al: 27 KAng SiO2: ~ 9 KAng	Introducing Dielectric	82%
19	Cr: 10 KAng Al: 30 KAng	Iterating New Recipe	86%
20	Cr: 4 KAng Al: 16 KAng	Iterating New Recipe	89%
21	Cr: Aiming for 4 KAng Al: Aiming for 14 KAng	Fine Tuning Recipe based upon coating #20	N/A