

pfRICH updates

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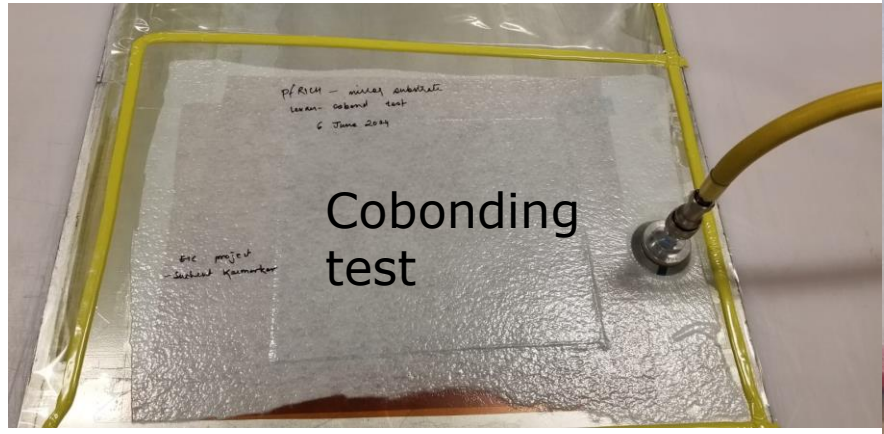
06 June 2024



Simon
Snydersmith
with pfRICH
end ring #2

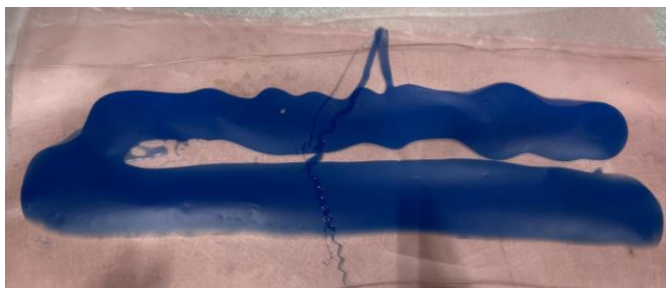
Summary

- ⬠ pfRICH end rings shipped to SBU
- ⬠ Second mirror substrate + lexan cobond tests on going
- ⬠ Sealing tests for sensor plane – test object underway for picture frame

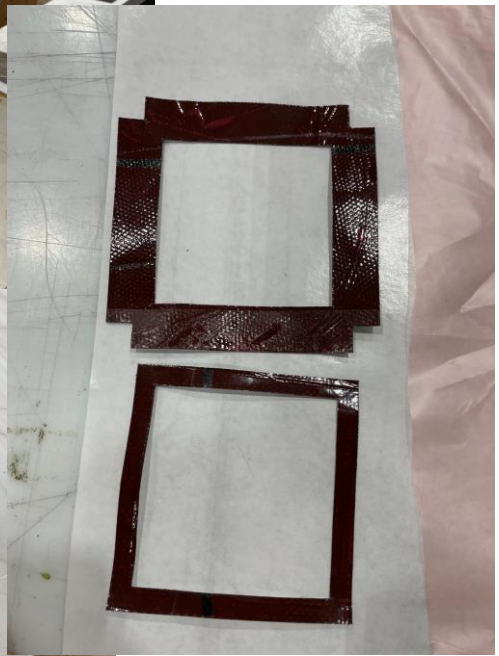


- ⬠ First silicon seal cast and is being cut to test out the seal

Cast silicon seal

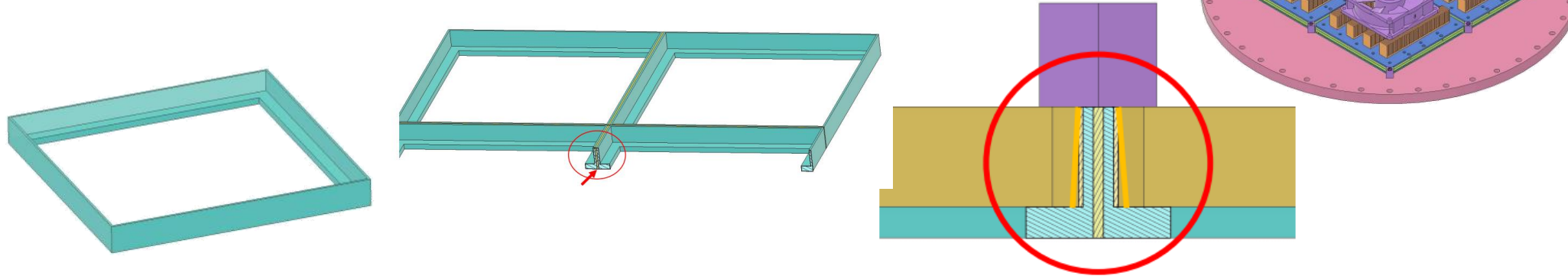


Picture frame for sensor plane layup 1



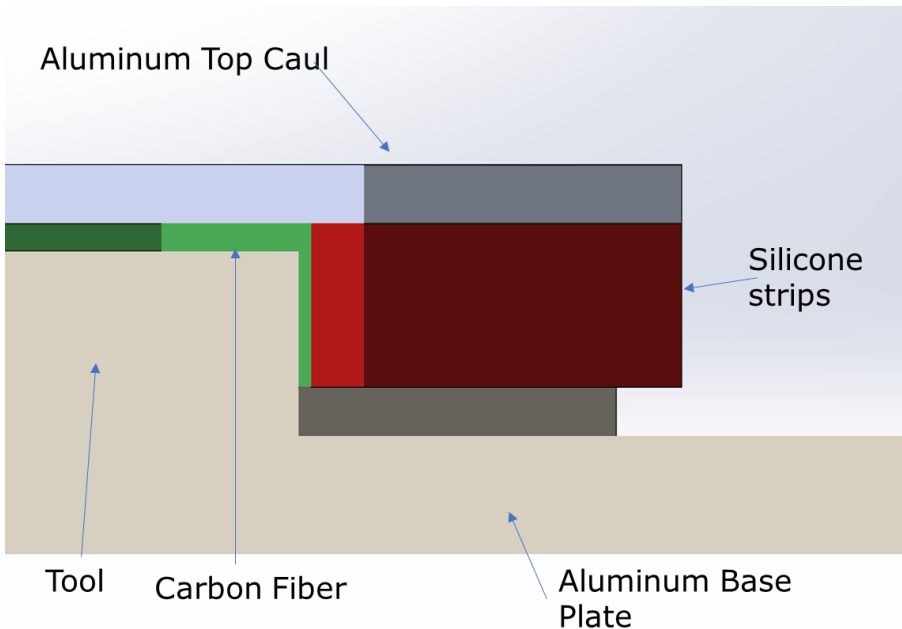
More details in Alex's presentation here -

<https://indico.bnl.gov/event/23365/contributions/92396/attachments/54918/93981/pfRICH%20Sensor%20Sealing%20Design%206-3-24.pdf>

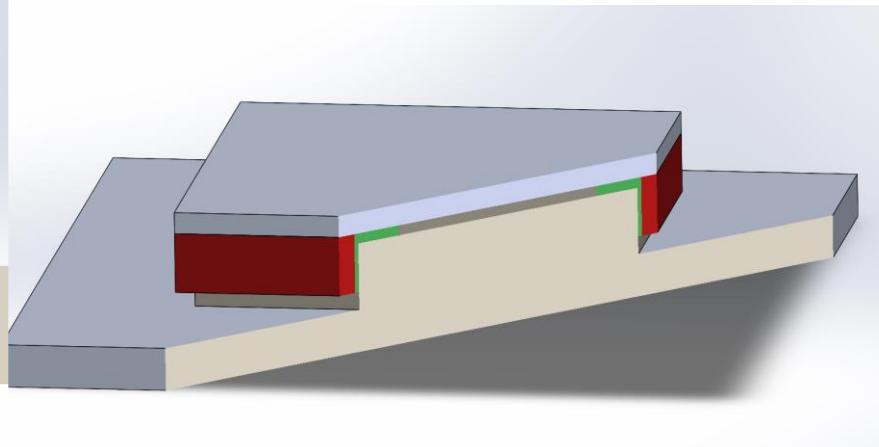


Sensors can then be installed in the sensor plane

(Note: shown here is the "2x2 sealing prototype" which I will discuss later and HRPPDs equipped with fans which are not part of the final design)



Although not shown in this cross-section (drawn in orange), we can taper the seal in order to create a light press-fit as the sensors are being installed.



- Sidewalls 1 mm thick CFRP
- Top surface 3 mm thick CFRP
- Cured under vacuum bag in autoclave
- Interstitial beams will be simple flat plate layups cut to shape by waterjet