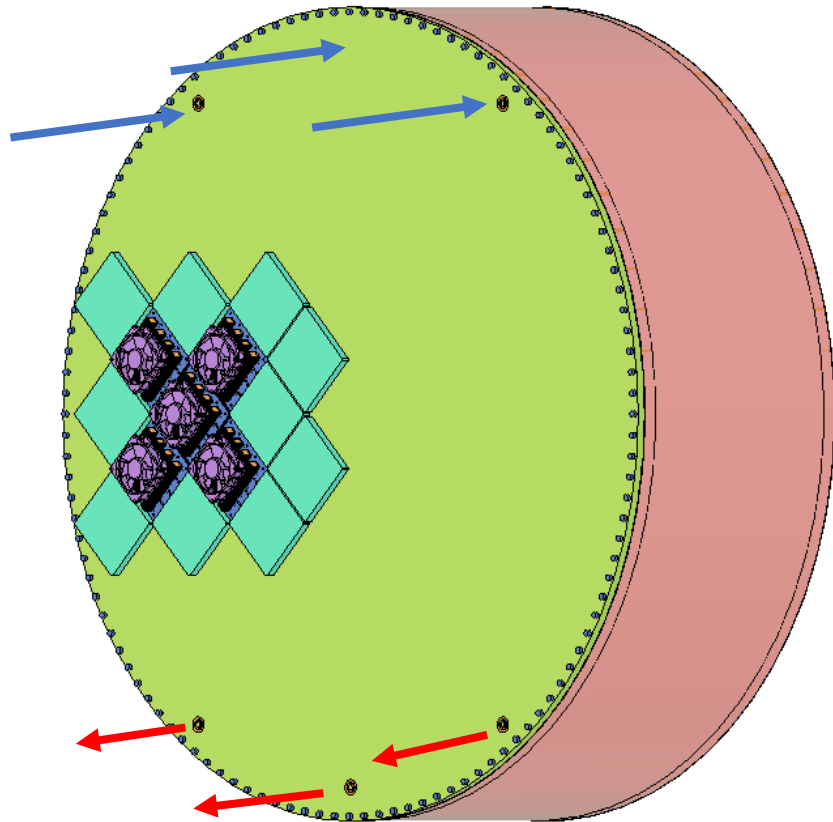


Engineering Design Update

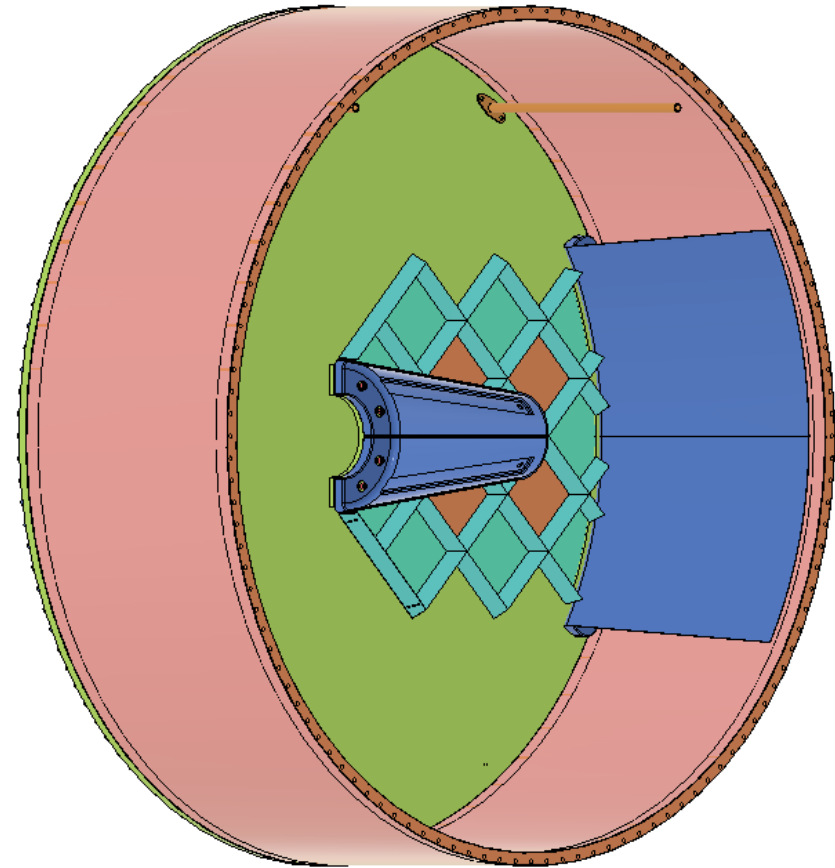
6-10-24

Alex Eslinger (JLab)

Gas System Concept (Beam Test/Prototype Version)

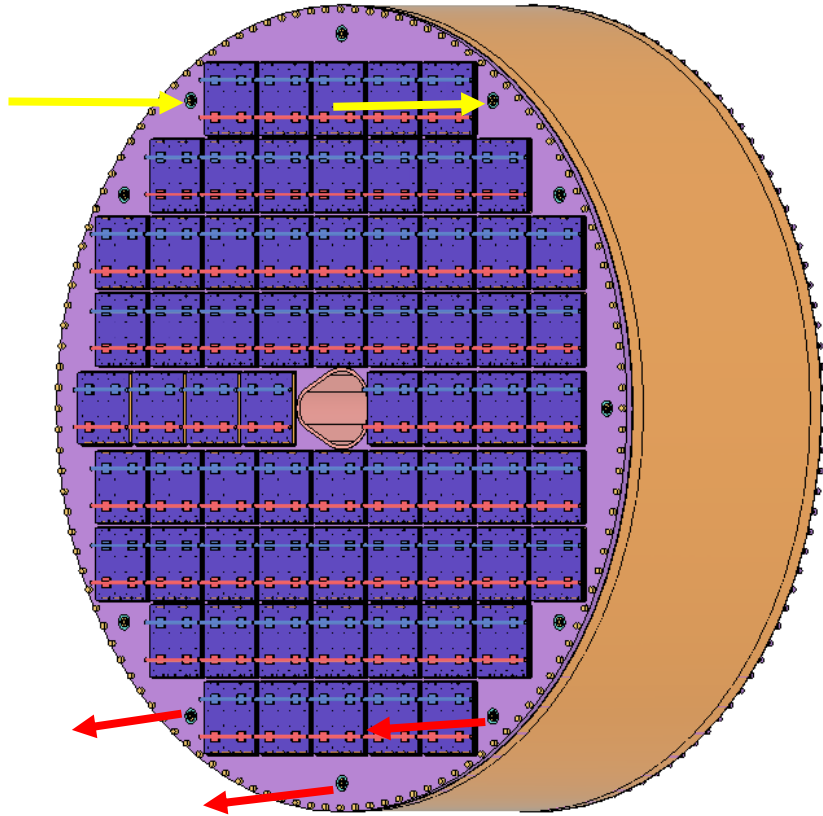


Three 3/8" ID Inlets, Three 3/8" ID outlets

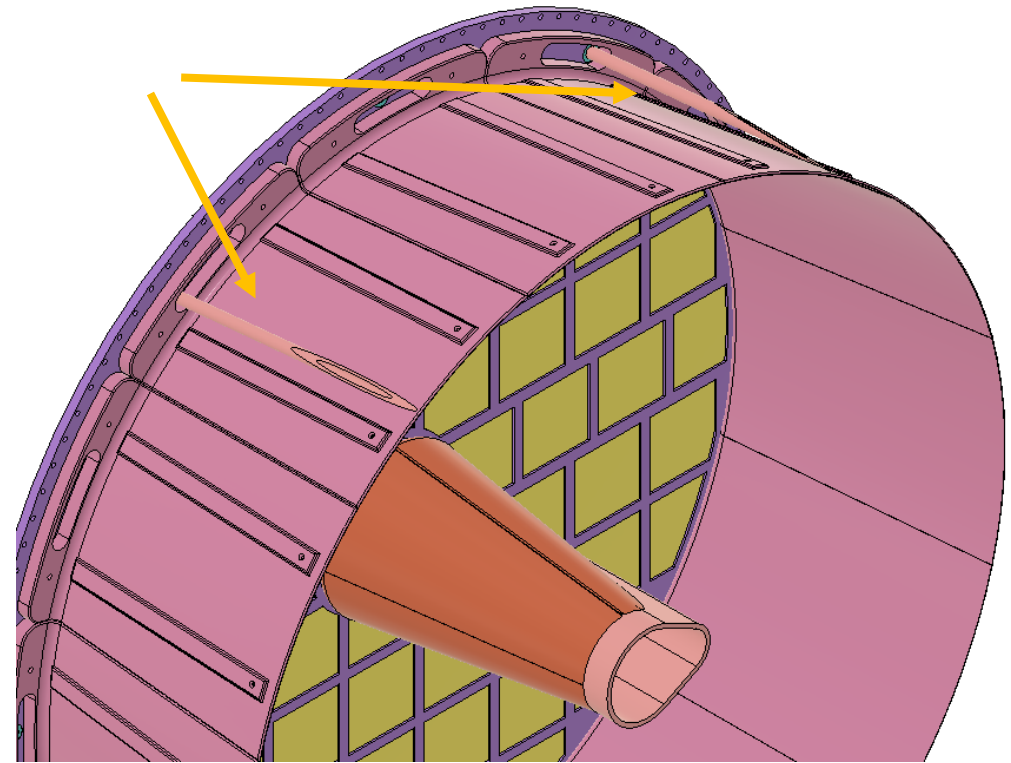


Inlets have two long 3/8" ID tubes at the top (CF?)

Gas System Concept (Final Design Version)



Two 3/8" ID Inlets, Three 3/8" ID outlets



Inlets have two long 3/8" ID tubes at the top with taper pointing to cylindrical vessel walls

Light Monitoring System Integration

- Discussions with Bob Azmoun to find out whether or not we can use custom diffusers.
 - Waiting to hear back from Luminit
- Talked to Dan Cacace about the diffusers in the TPC
 - TPC used $\frac{1}{4}$ " diameter, 1mm thick diffuser (circular pattern)
- Plan to integrate the TPC-sized diffuser in the model first, then when we hear back from Luminit, I can swap them out in the CAD model.

HRPPD Dimensions

- Brought my calipers from home to get some rough measurements of one of the HRPPDs:



HRPPD Dimensions (Cont'd)



NOTE: Final weight was **427.5g** (the protective tissue weighed 1g)

Still to do...

- Finalize mirror design (send CAD to SBU)
 - Add additional mounting holes to the ribs of the mirror (SBU request)
 - Determine how to mount the diffusers for the light monitoring system and what modifications to the mirrors (if any) might need to be made.
- Aerogel holding solution for beam test/prototype version
- New aerogel tiling scheme (based on manufacturing constraints) for final design version
- Add an o-ring groove into the HRPPD sensor for Incom to start looking at
- Thermal considerations?