

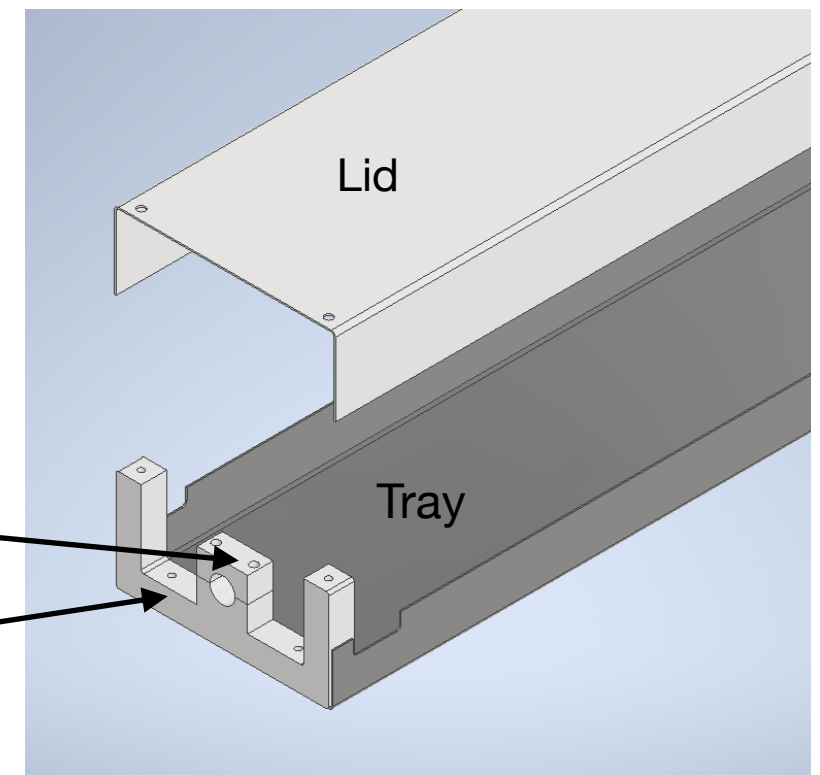
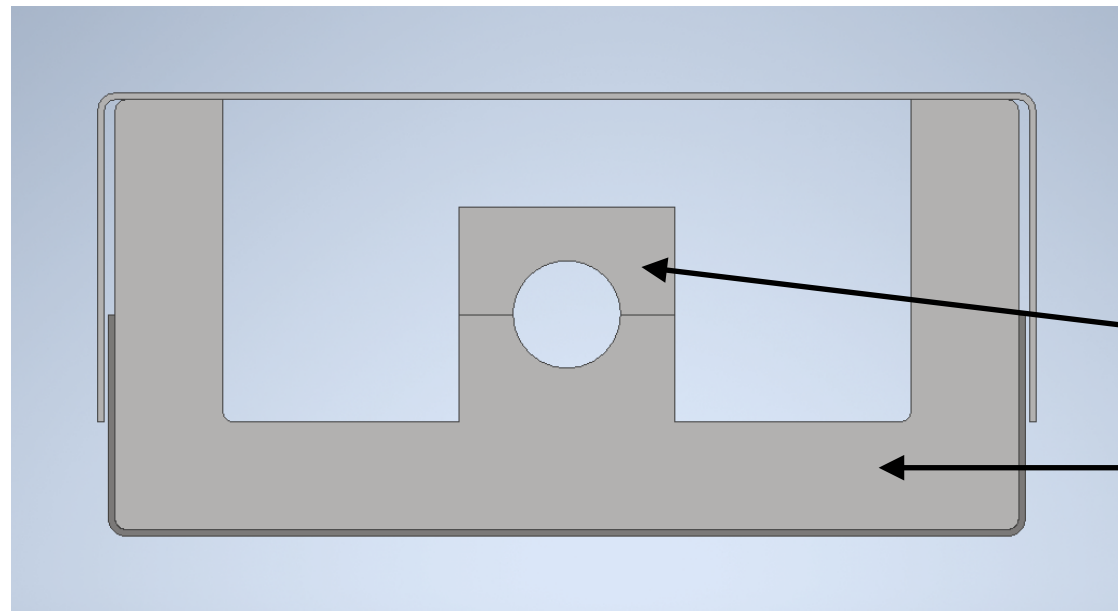
**DUNE FD2 Photon Detector
Cold Electronics Enclosures for Module-1**

**Common Design for Cathode and Membrane PD Modules
Direct Shielding of IR leakage at POF Connectors**

P. Debbins
University of Iowa

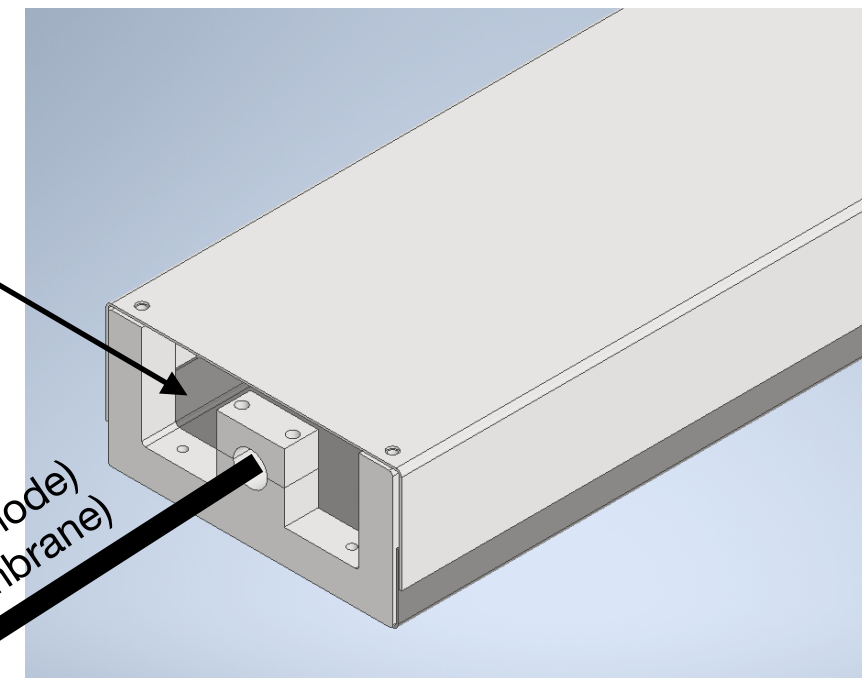
June 26, 2003
Mechanical group meeting

Electronics Enclosure Architecture



Open area of ends can be covered with wire mesh for electrical shielding, while allowing highly open venting for Ar.

Design carries forward from M0 design, with changes to the endwall. M1 design has only a single type of endwall, attached to the tray, with a clamp for the fibers/cable. Electronics board mounts to tray.



Fiber Conduit (Cathode)
Cat 7 Cable (Membrane)

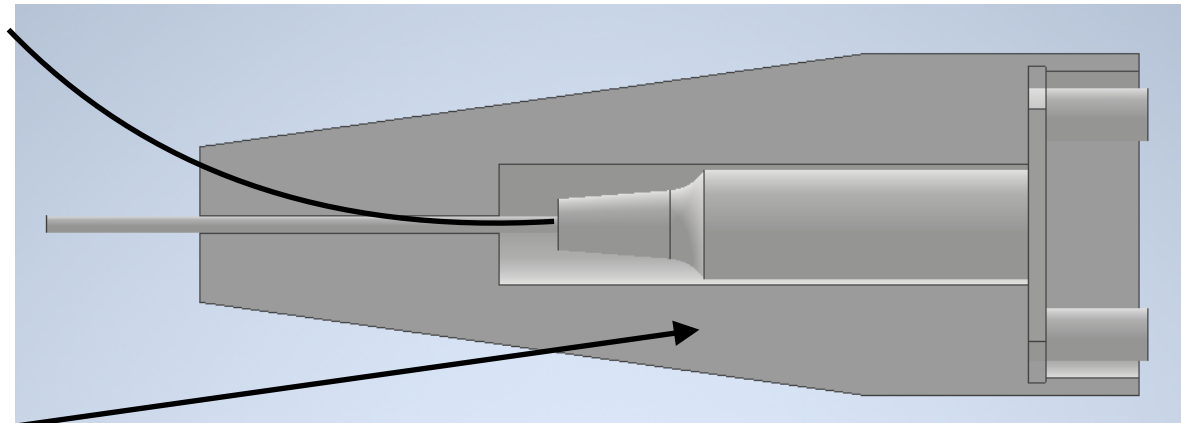
Both sides same - allowing cable entry from either side

Need current mechanical models of both DCEM and DMEM electronics.
Any changes to electronics design with mechanical implications needs to be understood for design of the enclosures.

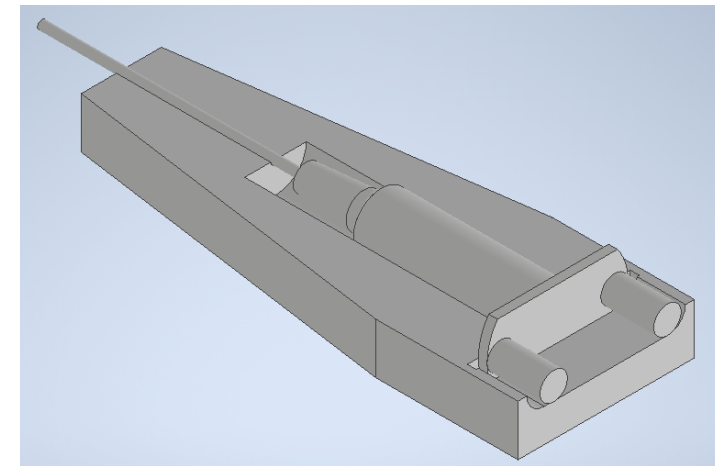
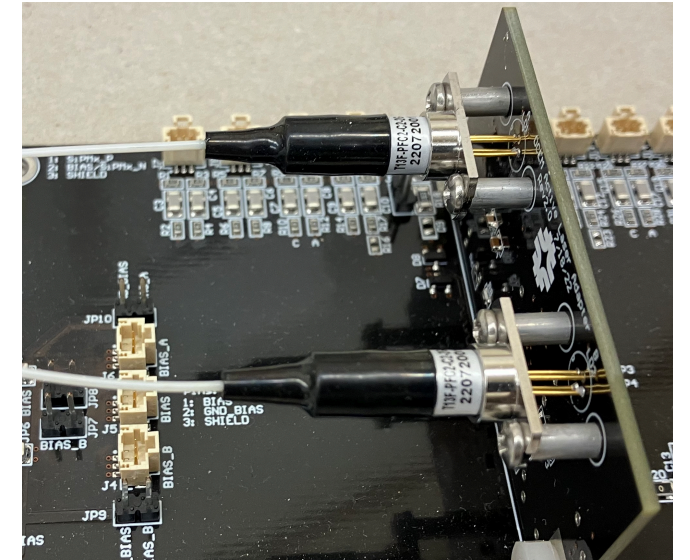
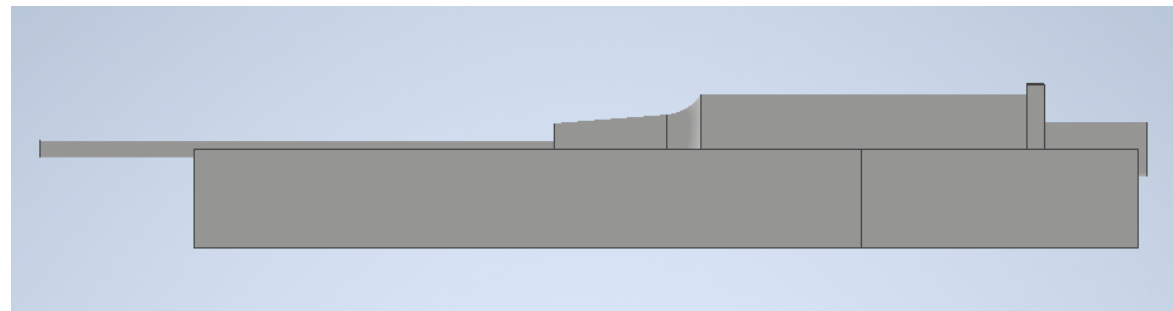
Direct Shielding of IR at Tx/Rx

Signal Transmitter Shown. POF Receiver done similarly

Use Curved Exit



Use 'stepped' mate between upper and lower halves to eliminate any crack in mating plane of halves.



Clamshell type enclosure to isolate fiber Tx/Rx modules.

Need to have current mechanical drawings for the fiber modules.

Materials for shields needs to be determined.