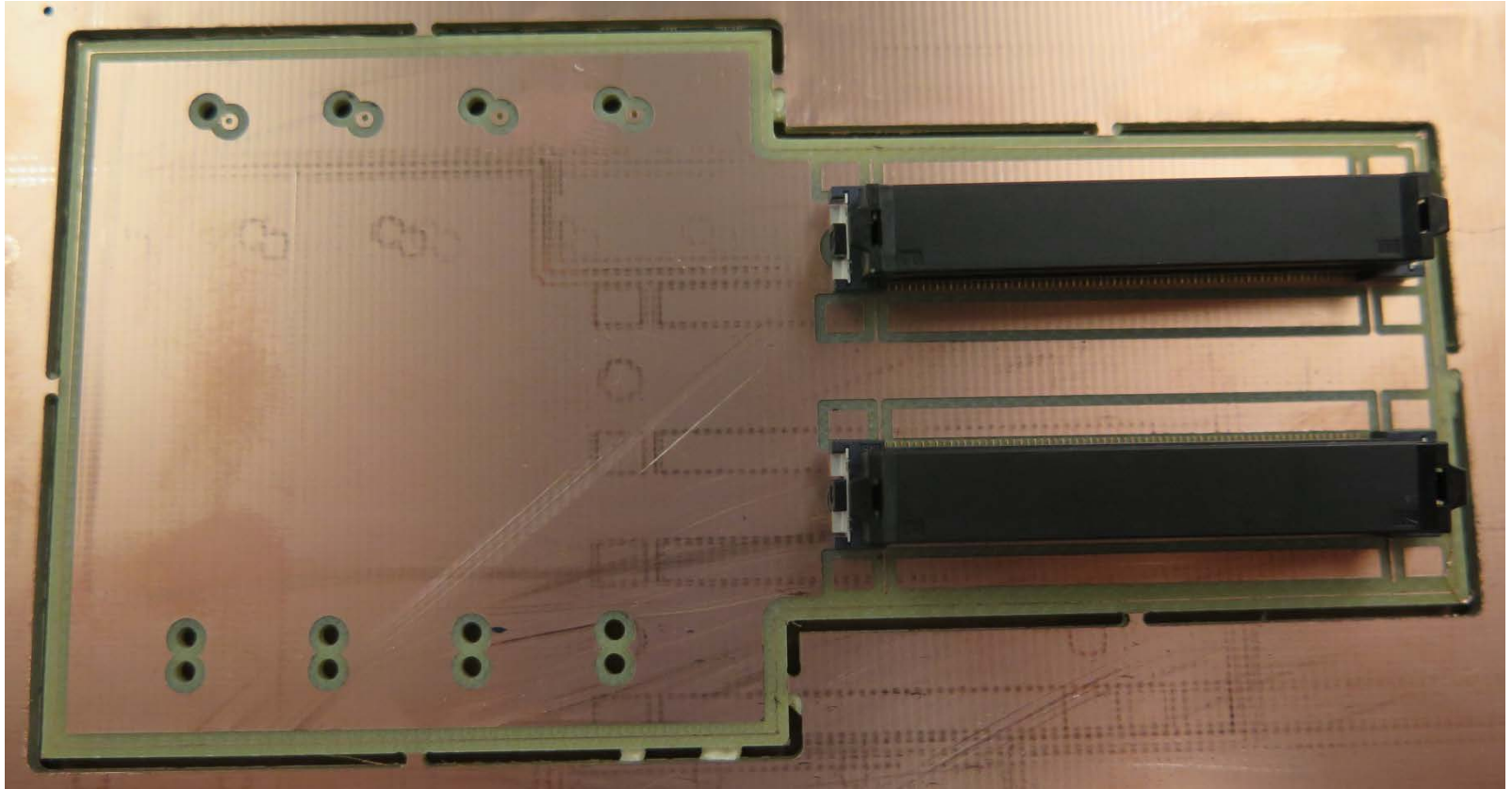


# mRICH MA-PMT readout

## 9-APR-2018

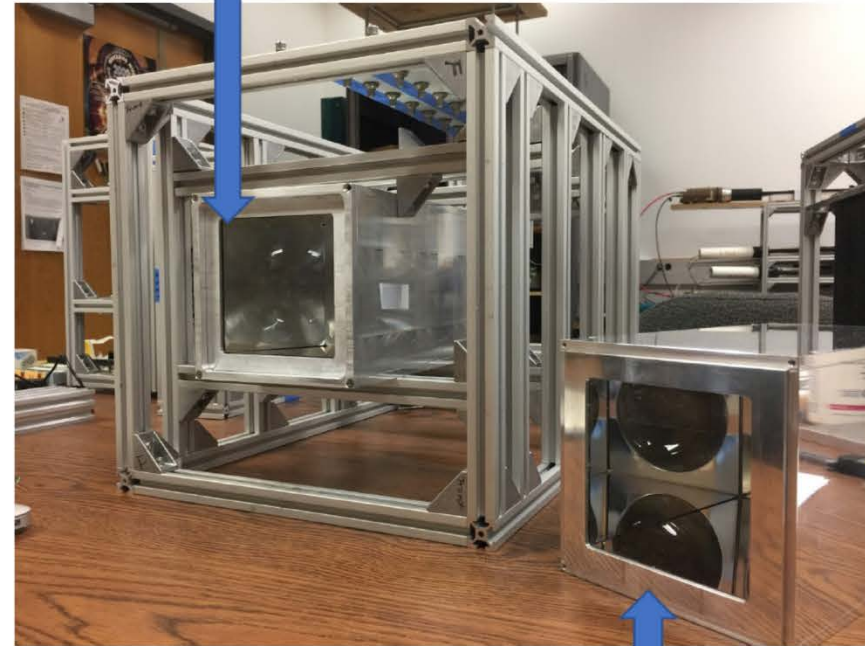


**Carrier Board Mechanics Check**  
**Matt Andrew, Jose Duron, Tommy Lam, Emily Lum,**  
**Gary Varner**

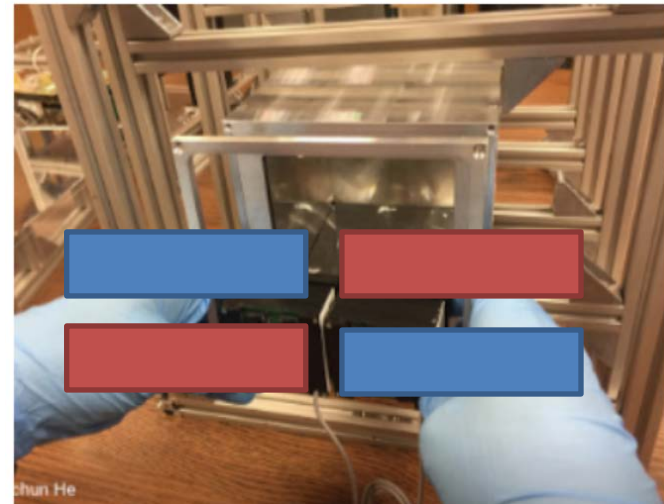
# Detector to be tested (Tommy, Emily working on)

- We constructed two mRICH holder boxes. One is for using Fresnel lens ( $f = 6''$ ) and the other is using a spherical lens ( $f = 8''$ ). The same readout electronics can be attached to the end of the holder box.
- The design drawings are appended at the end of this document.
- The following slides show the details of the holder box so that a proper readout electronics can be developed.

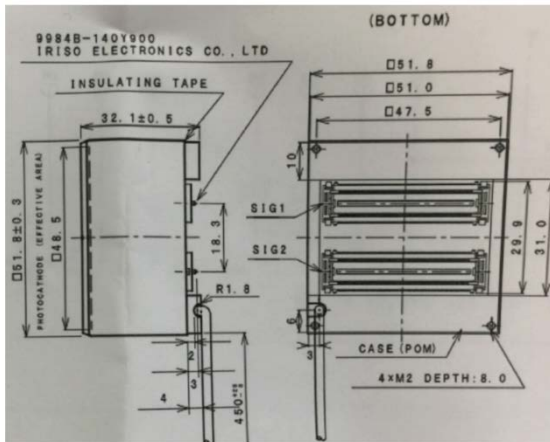
mRICH with Fresnel lens



mRICH with spherical lens

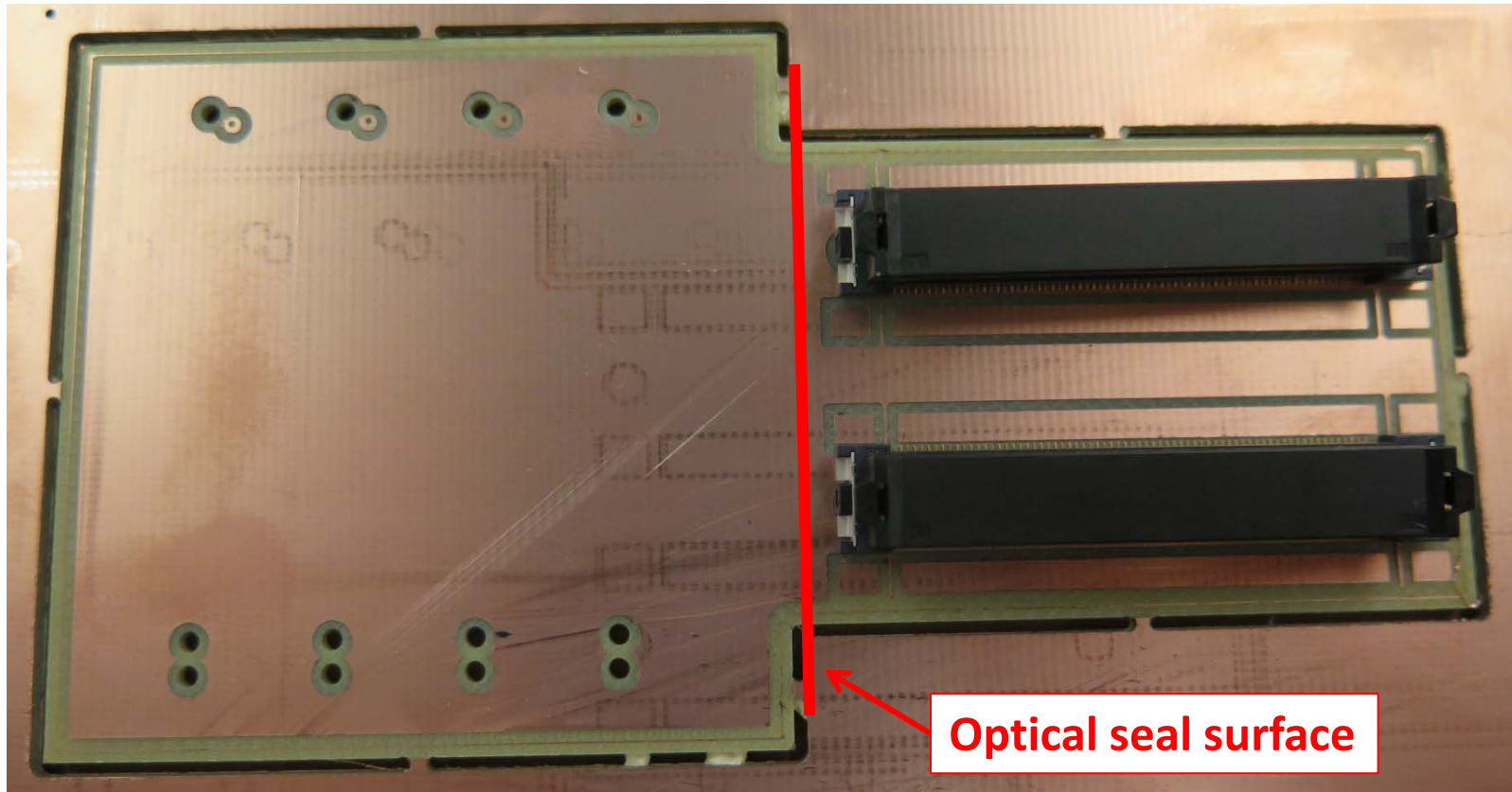


4 x 256 channel readout  
Carrier boards route  
signals to left and right  
readout stack, permitting  
optical seal of Carrier first,  
then mount readout



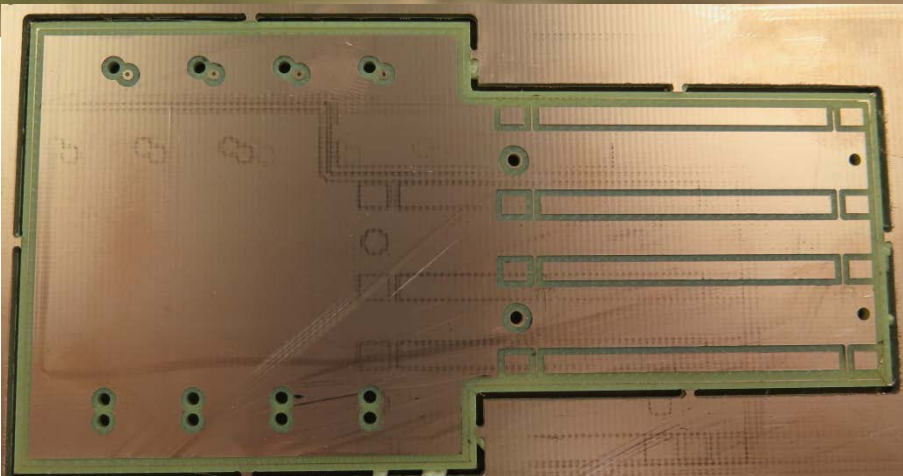
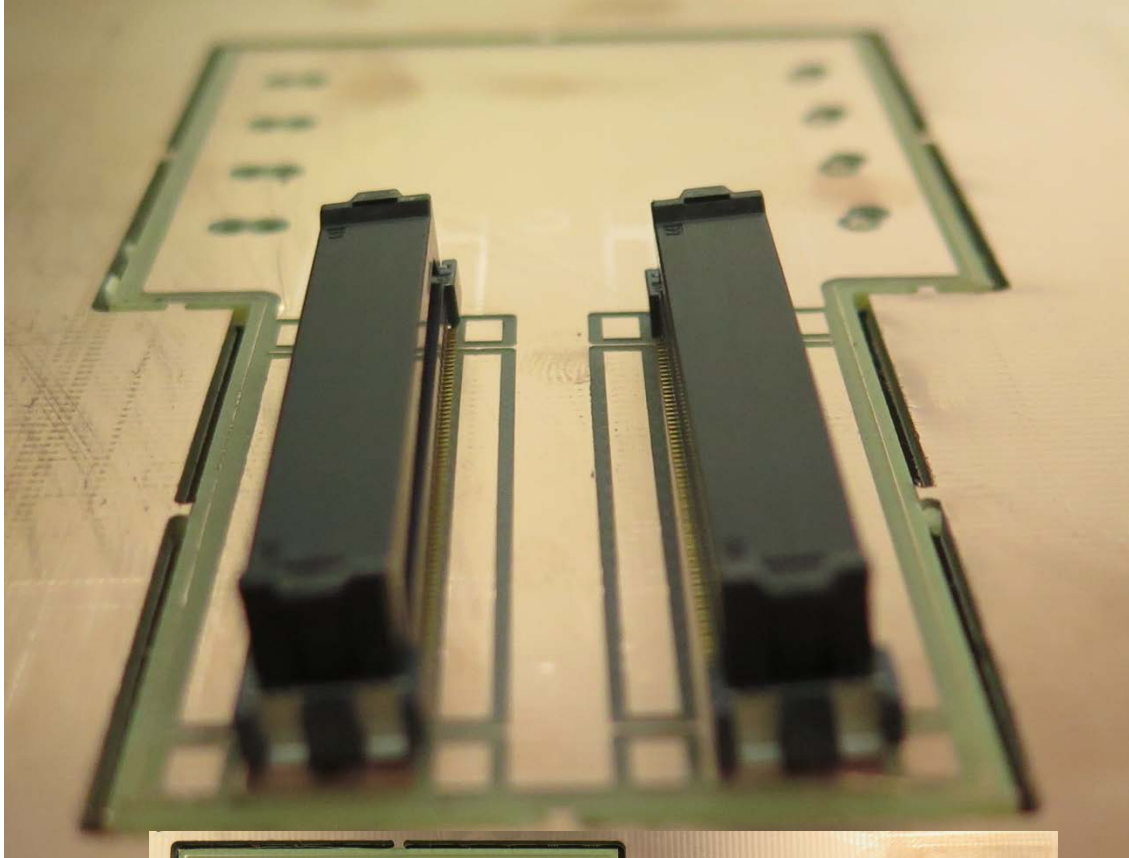
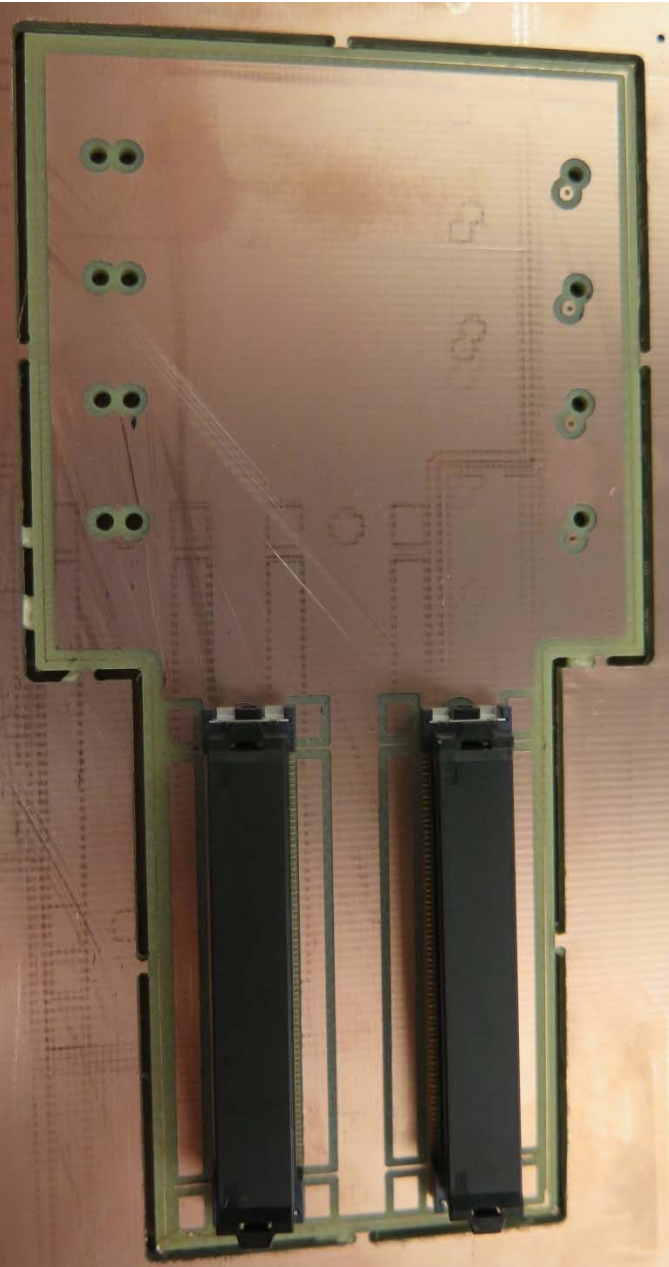
H13700 Dimension

# Carrier Board bottom

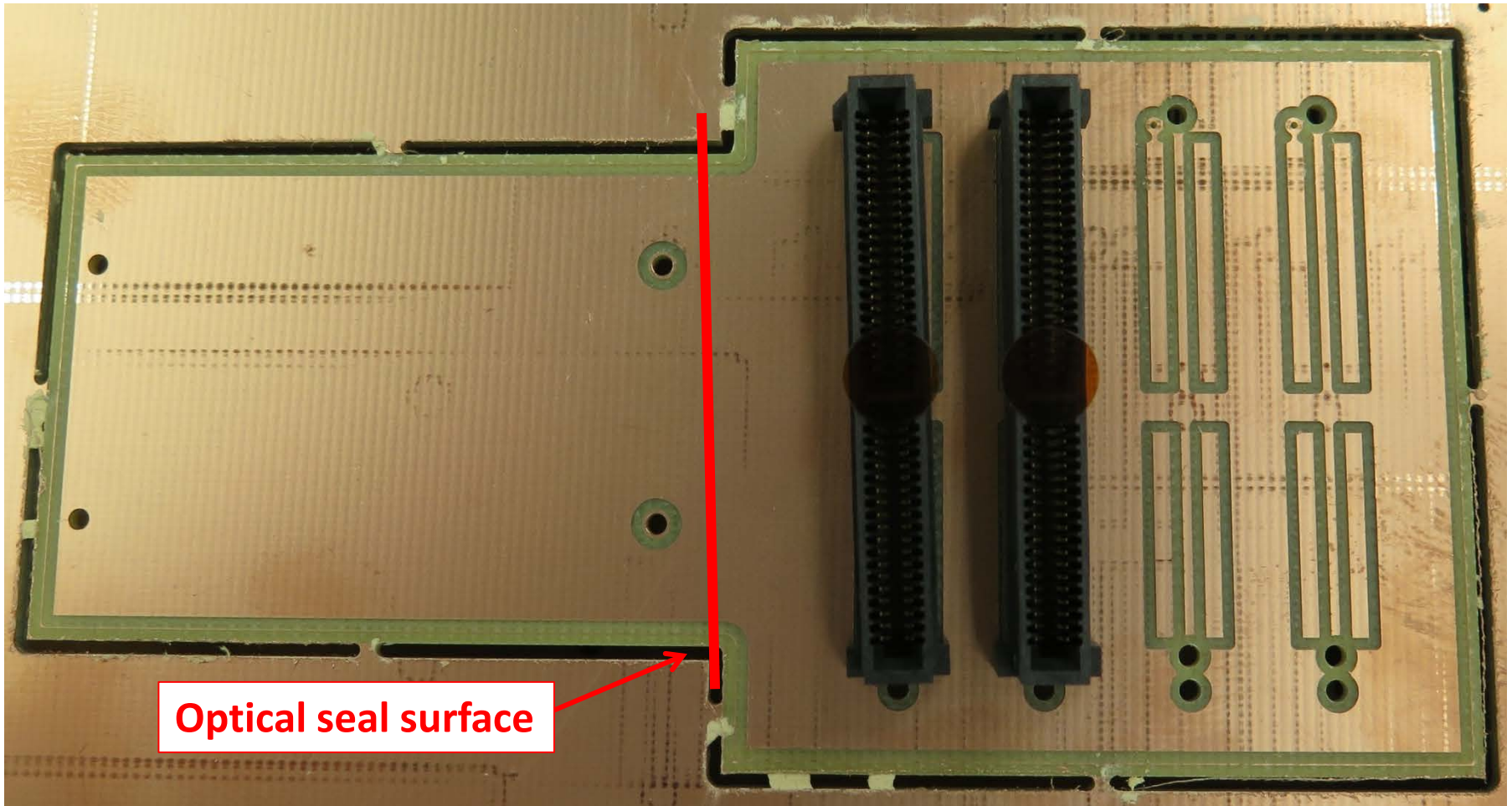


- 2x high-density PMT interface connectors bottom-side
- No other components planned on “bottom” side

# Carrier Board bottom – additional views

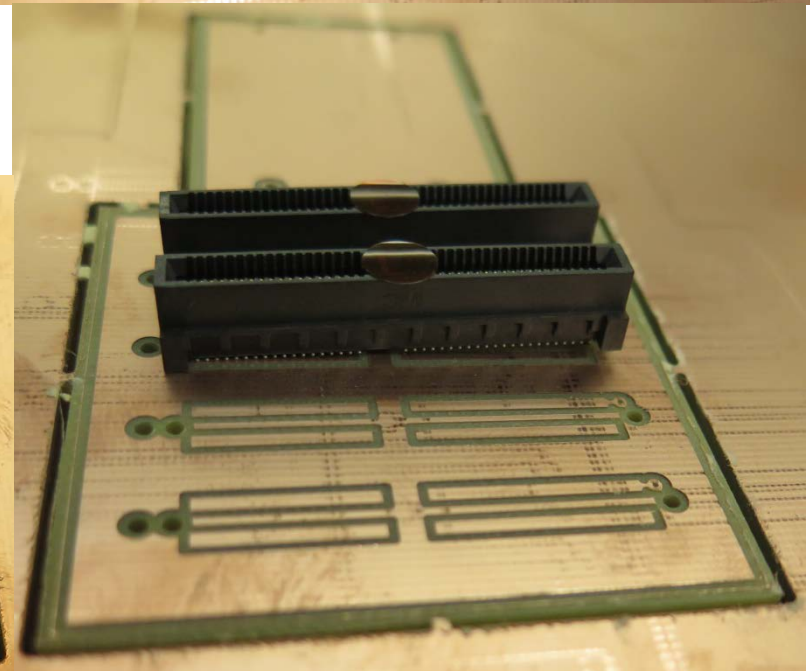
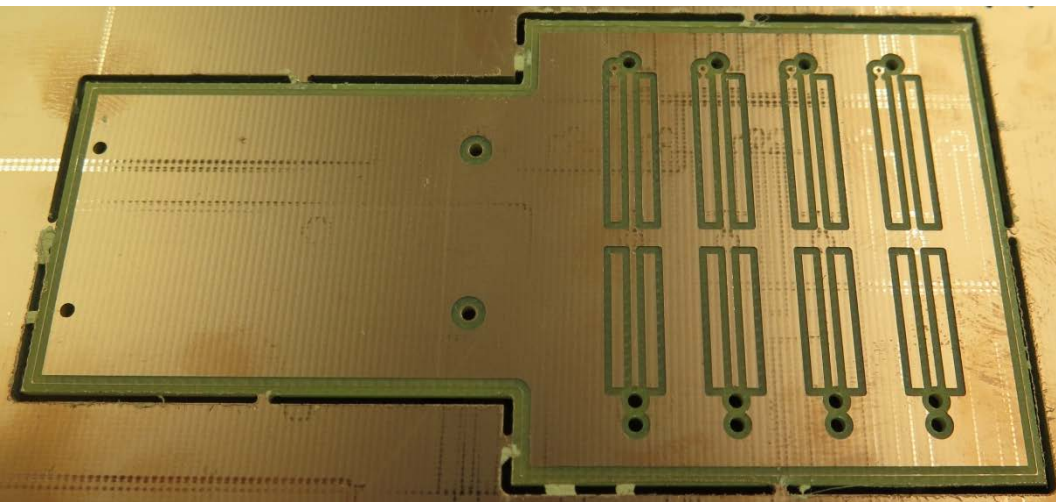
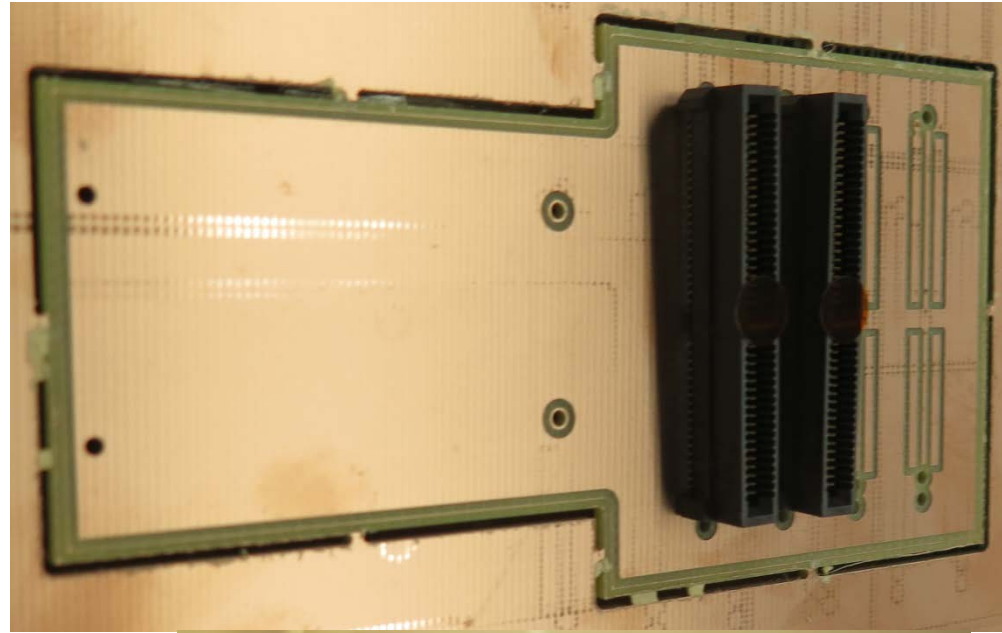
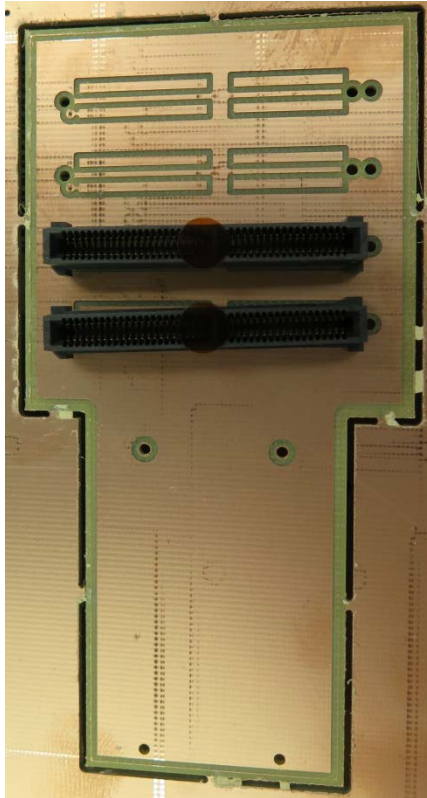


# Carrier Board top



- 4x Daughtercard (DC) Sockets “top” side
- Route only anode (analog) signals and ground to input of DC
- Boss holes had wrong drill size (tool set limited), but otherwise OK

# Carrier Board top – additional view



# Scheduling

- **Emily pushing hard to finish layout**
- **Should have fabricated boards back during William's visit**
  - Will check with our PMT
  - Can bring 4x populated boards back with him to work on light sealing on actual detector
- **Any issues seen?**