

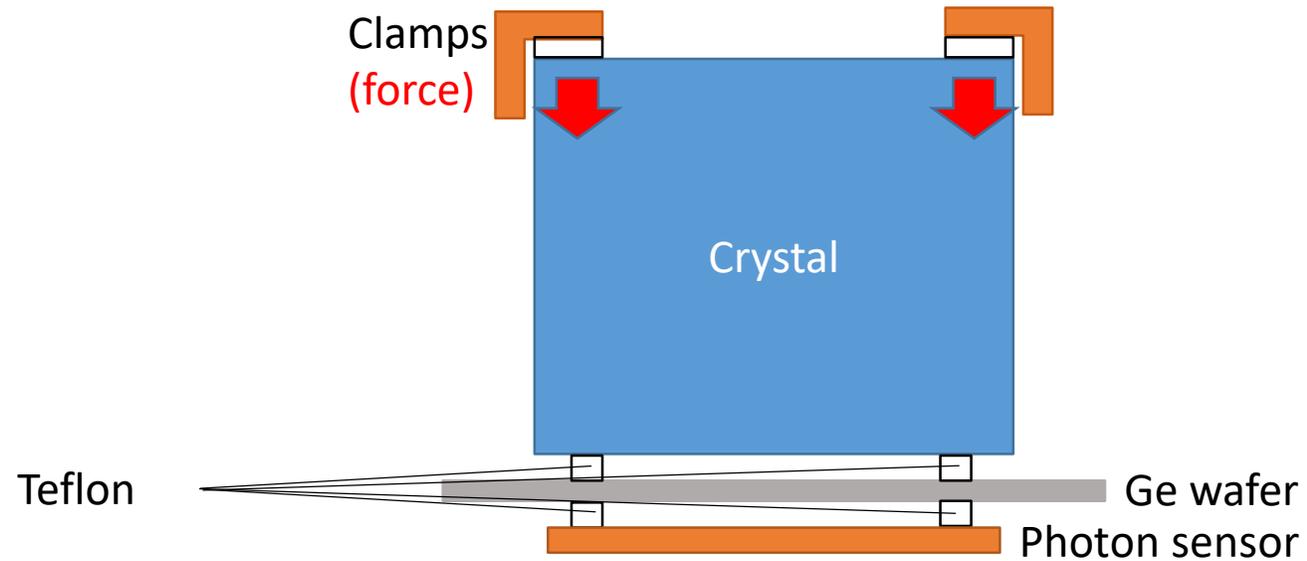
# Weekly Report

2019-06-24

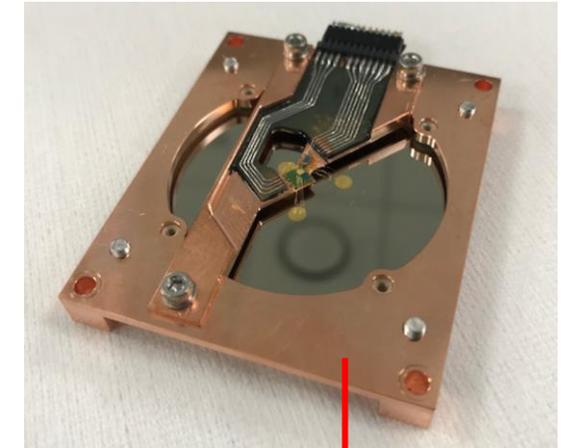
Kim, Hanbeom

# Detector Design Improvement (plan)

- New idea:

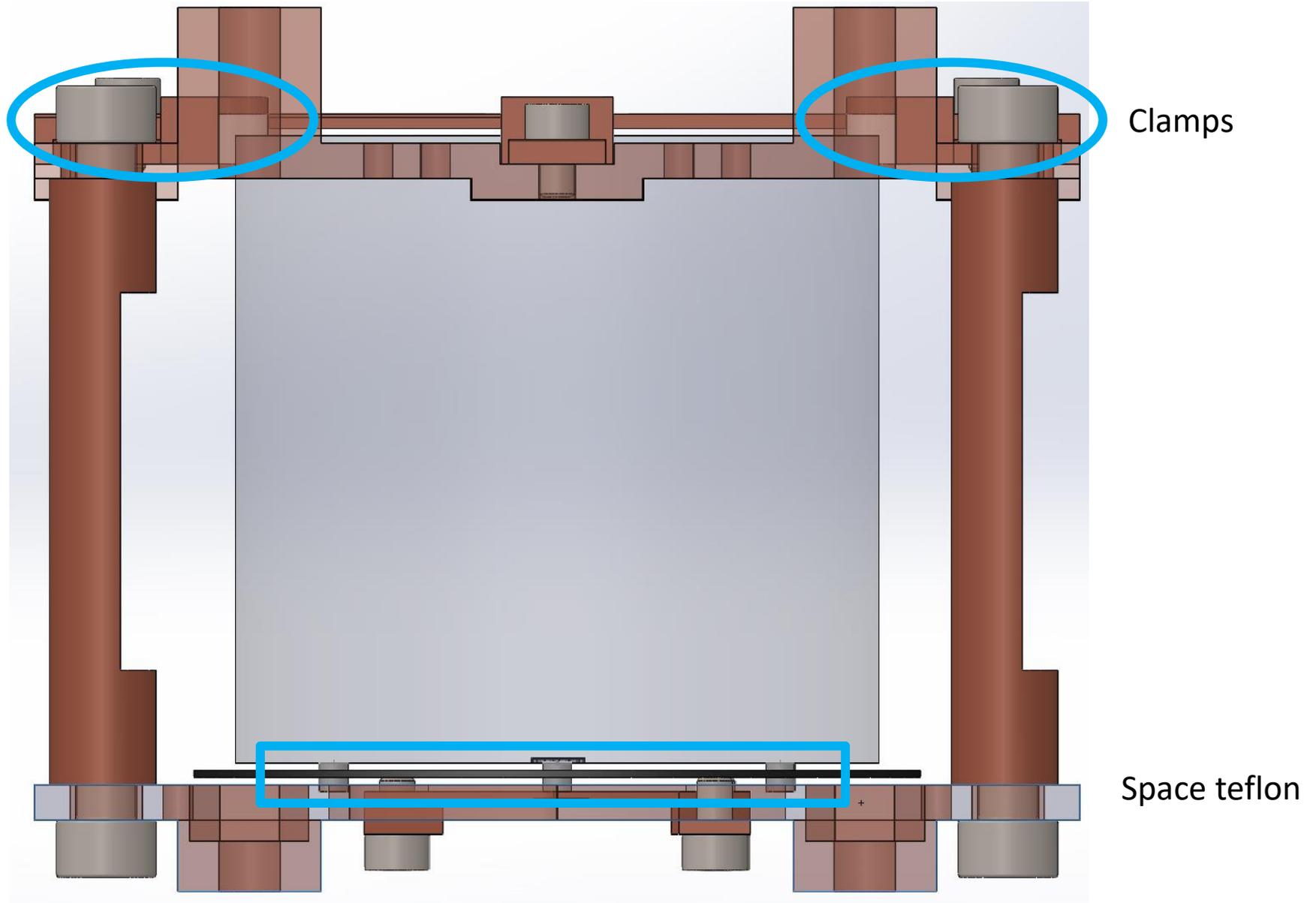


- Goal: reduce photon signal noise by vibration

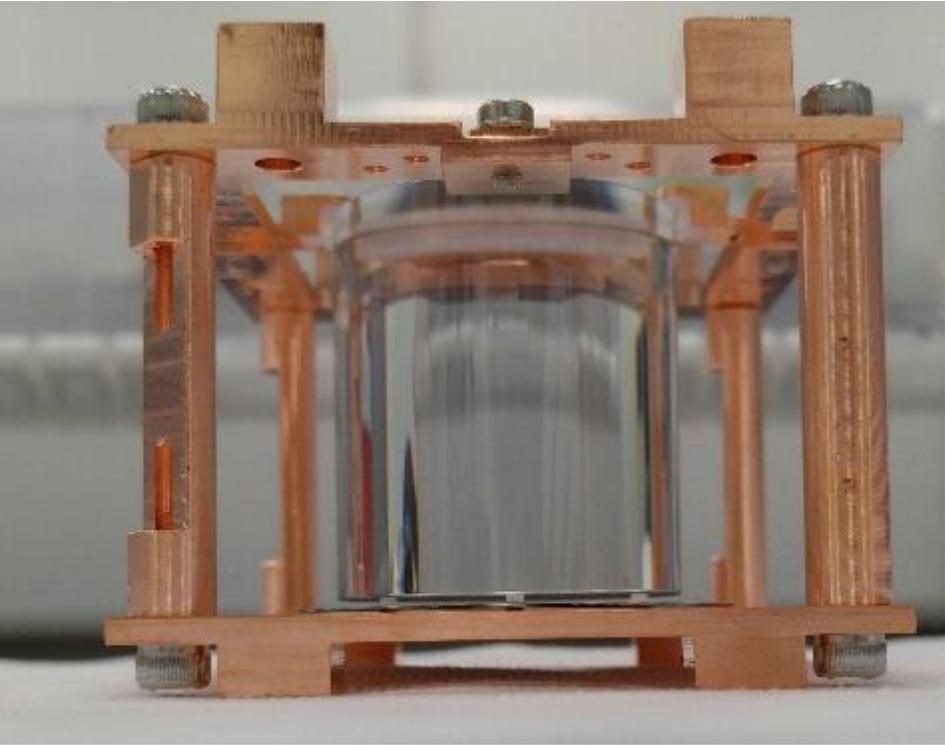
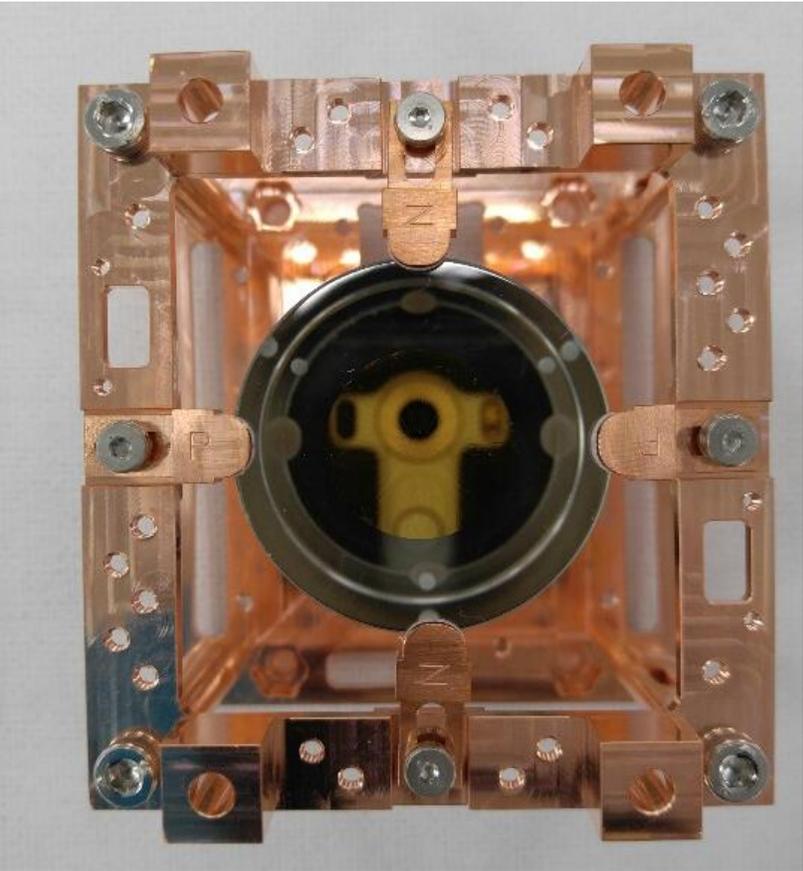


Get rid of this part  
(minor goal: Cu  
mass reduction)

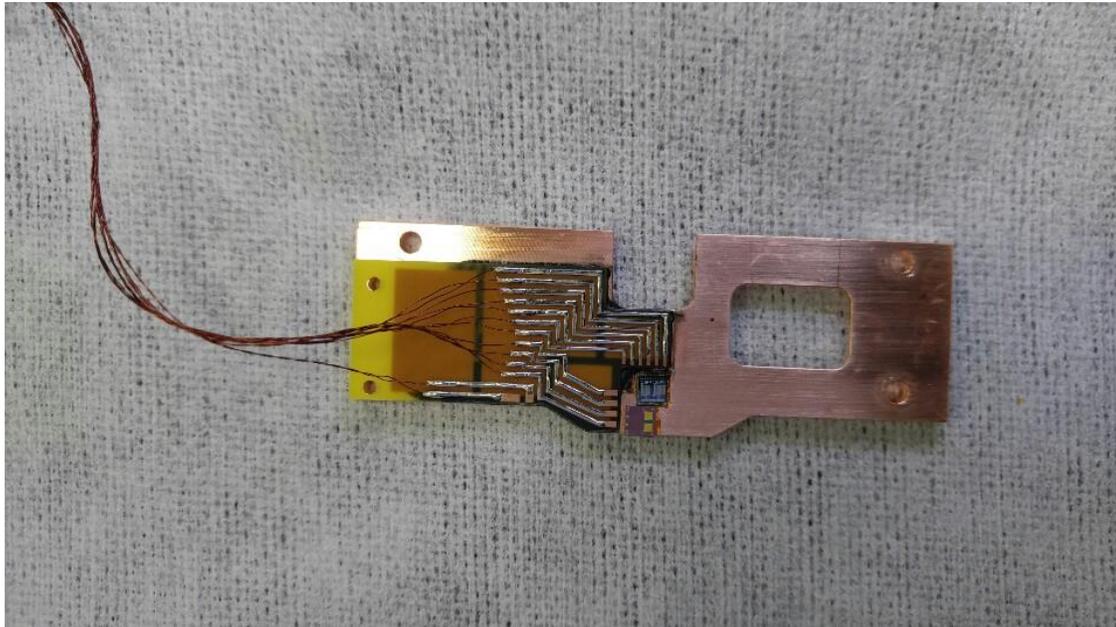
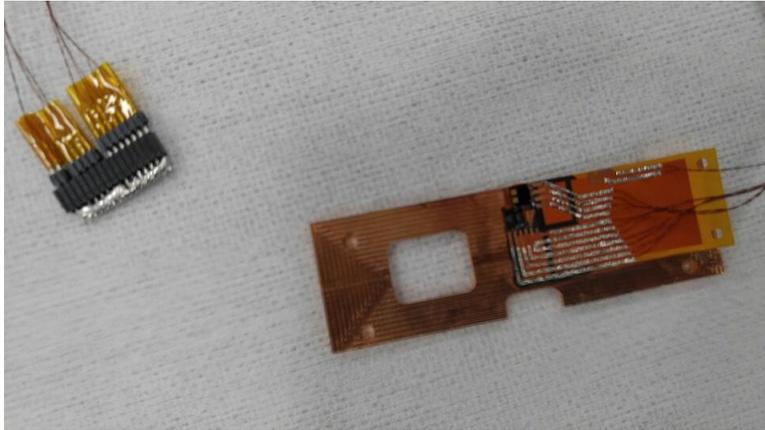
# New detector module design - 190520



# New detector module design



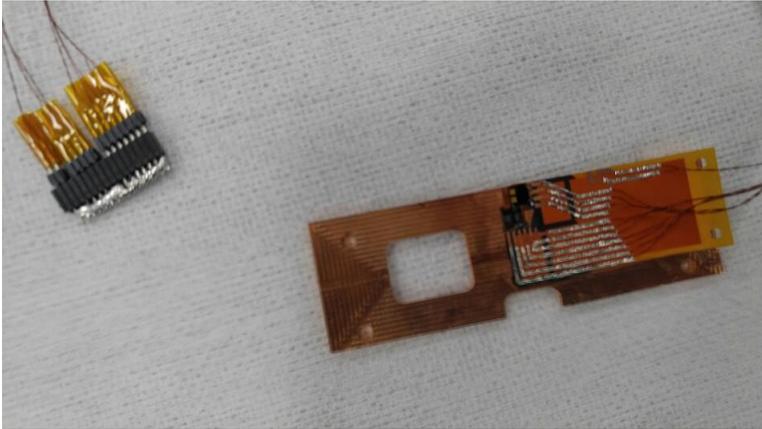
# New detector module design – sensors



Phonon:

- Redesign: stuck by clamp!!
- ...
- Now:
- NbTi Wiring & PCB finished
- Chips attached
  - SQUID: PTB (M17)
  - MMC: A17\_02\_1M\_BLM5P No. 49 (Ag:Er)
  - Al bonding & 4K test needed

# New detector module design - sensors



## Phonon:

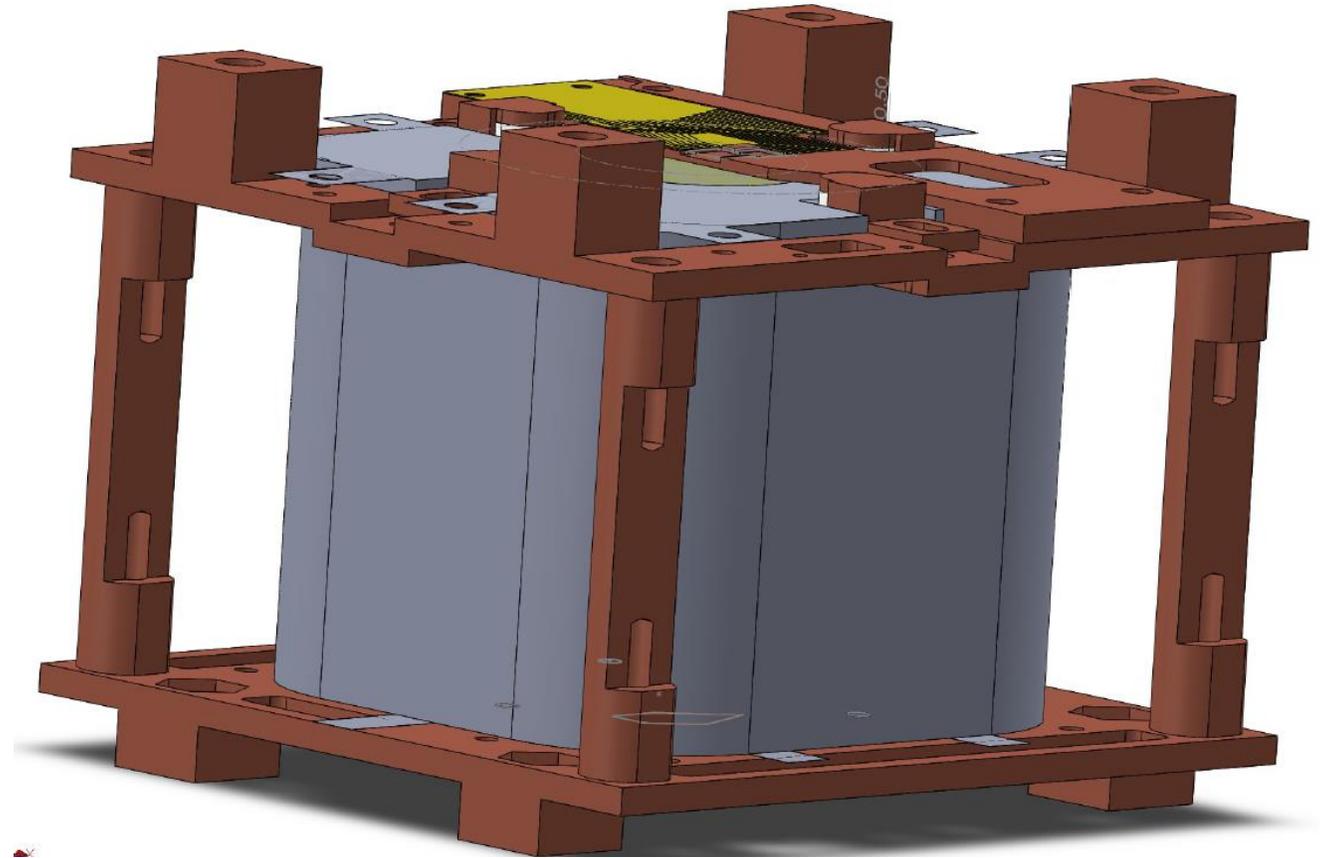
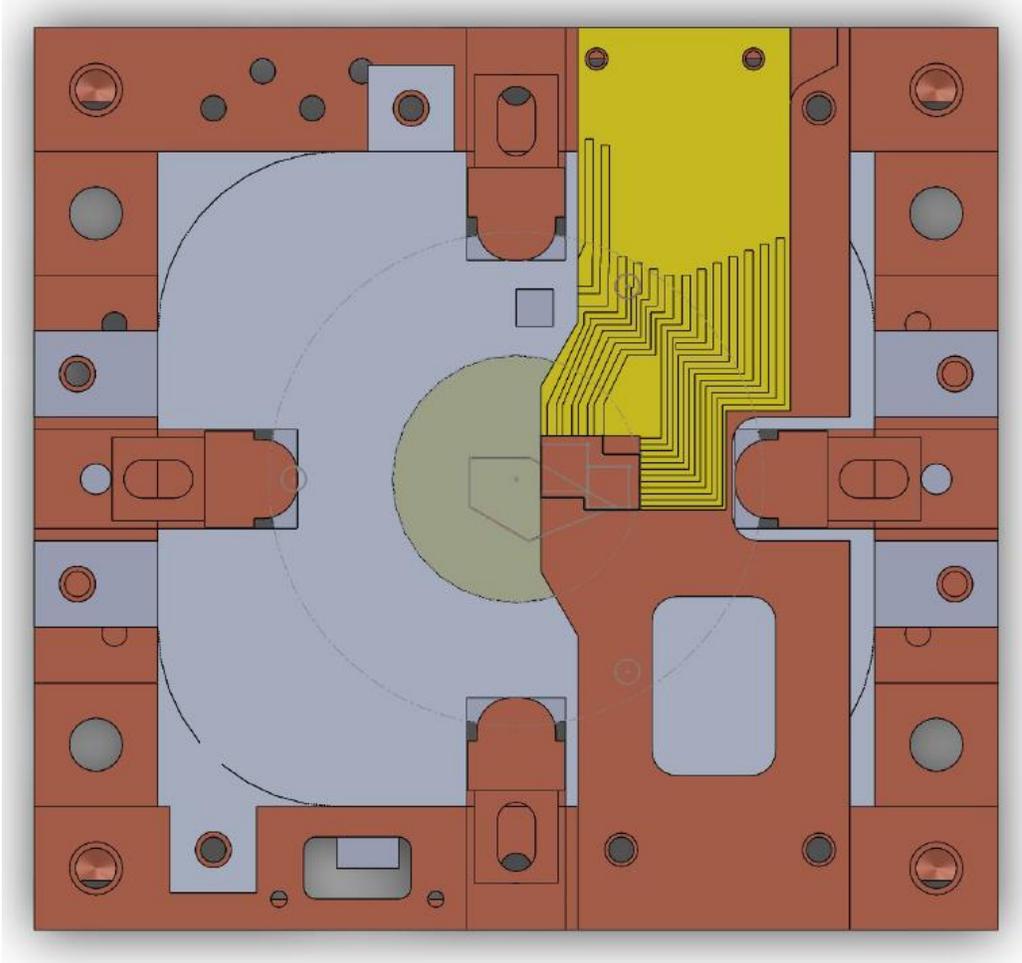
- NbTi Wiring & PCB finished
- Chips attached
  - SQUID: PTB (M17)
  - MMC: A17\_02\_1M\_BLM5P No.14 → 49
  - 4K test needed



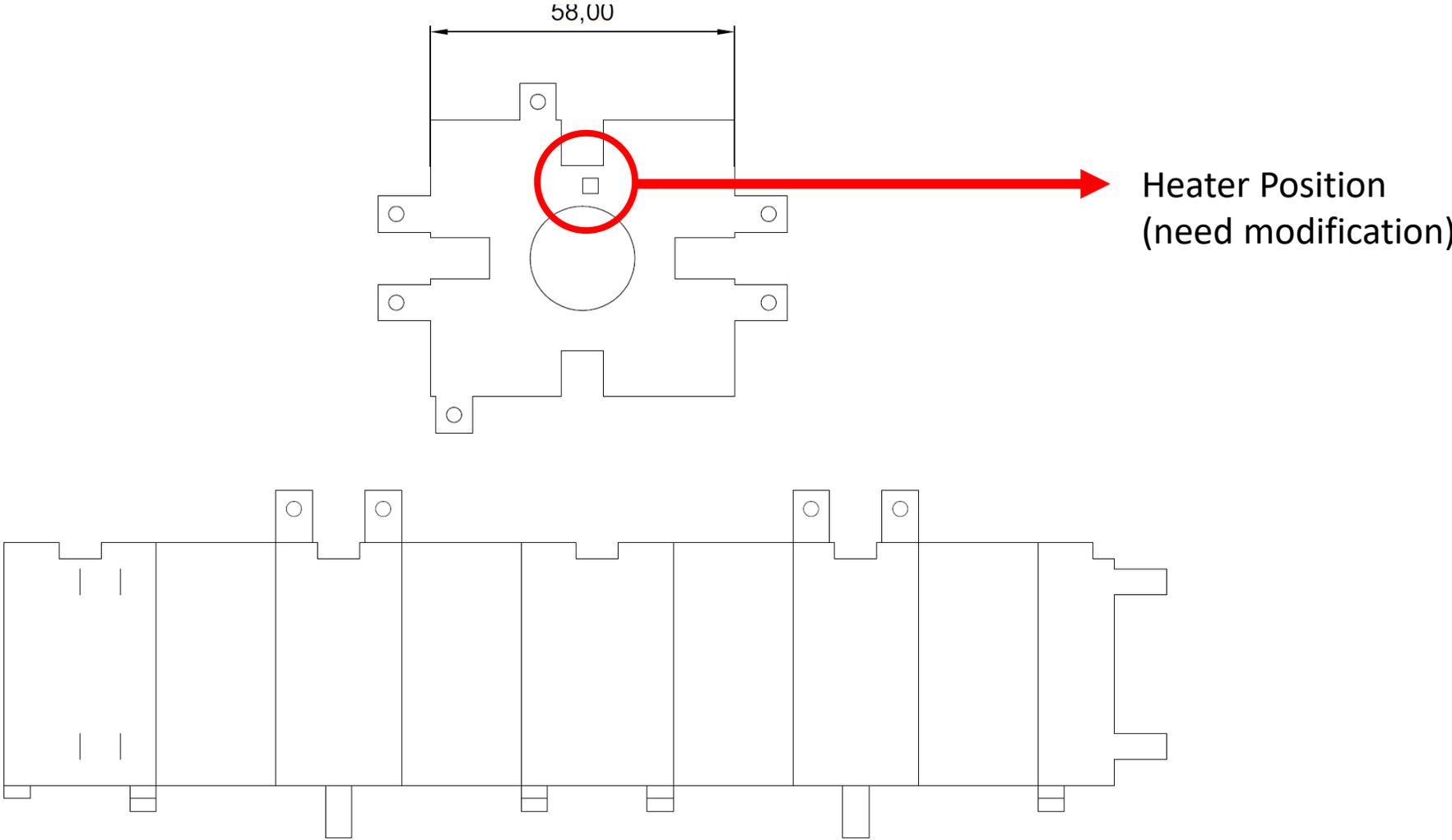
## Photon:

- NbTi Wiring & PCB finished
- Chips **attached**
  - SQUID: PTB (M18)
  - MMC: A17\_02\_1M\_BLM5P No.4
  - 4K test done

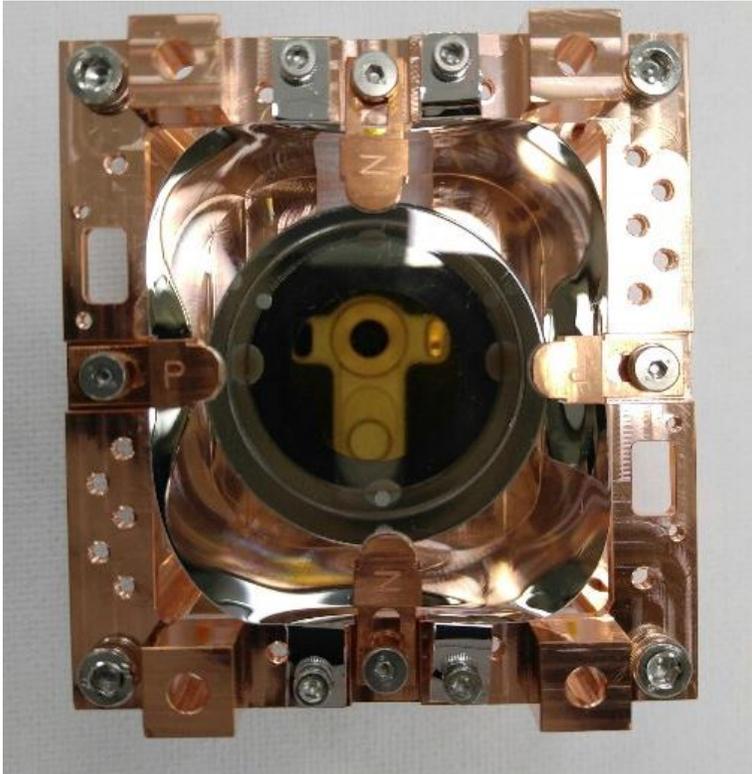
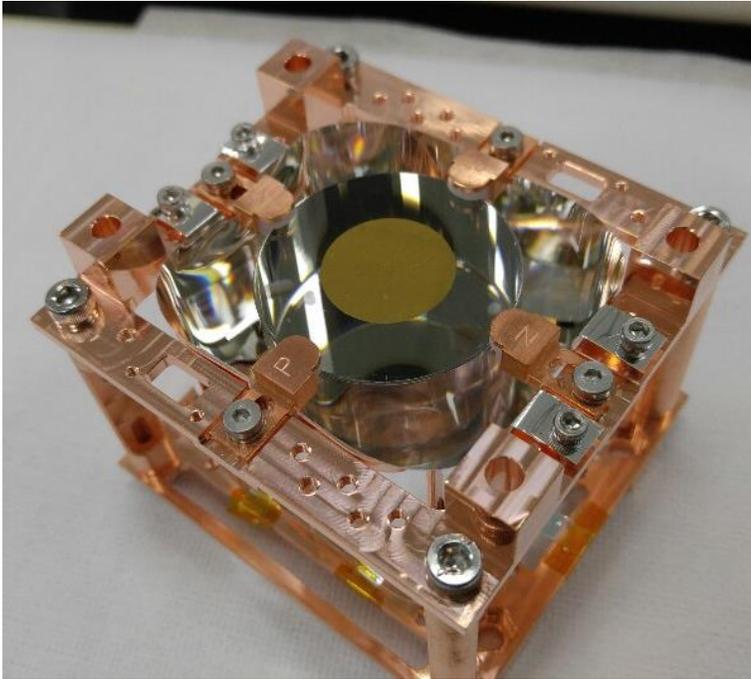
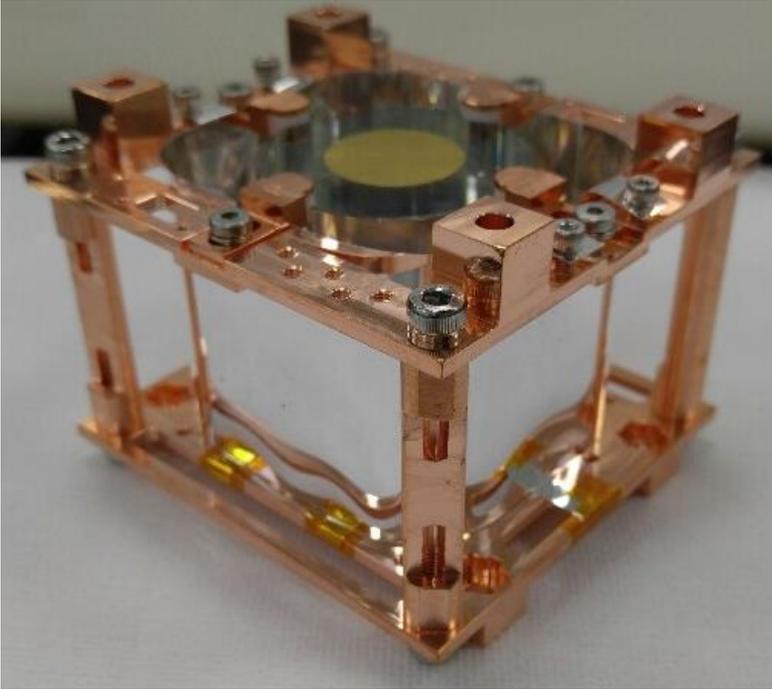
# New detector module design – reflector



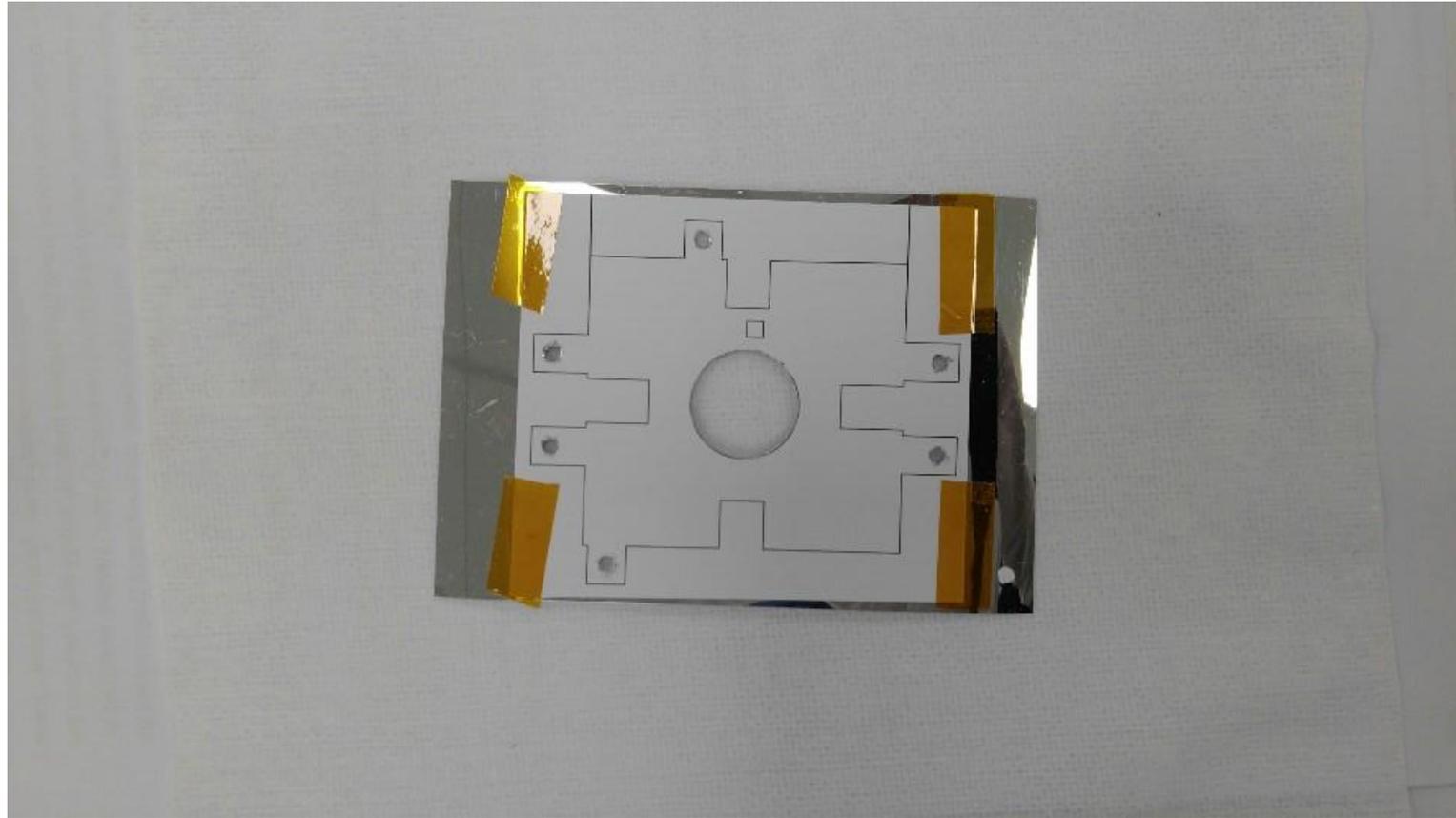
# New detector module design – reflector



# New detector module design – reflector



# New detector module design – reflector



## New detector module design – further plan

- Attachment of MMC & SQUID + Wiring - Done
- 4K Test – half done → **delayed: phonon sensor holder redesign**
  
- Assembly of detector including clamp, wafer, and crystal – plan: to finish in this week
- To make reflector
  
- ~~Test on RODY (refrigerator at IBS) – plan: to start within next week~~
  - ~~ASAP, but rainy this weekend~~
  - With LMO test (**gold evaporation failed...**)