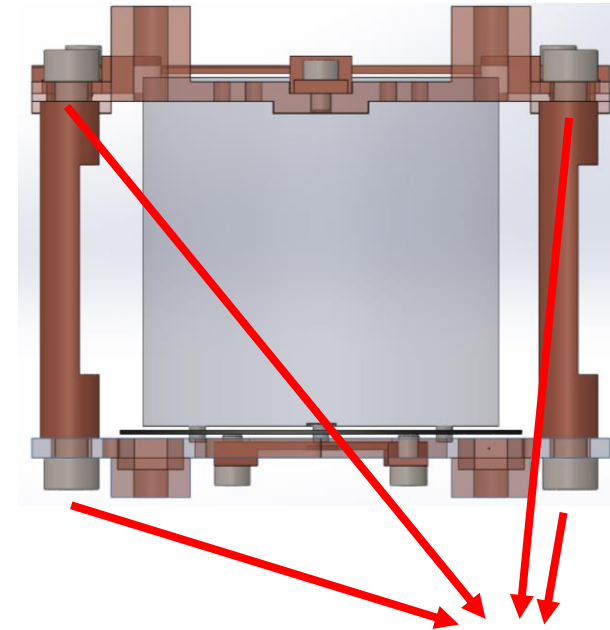
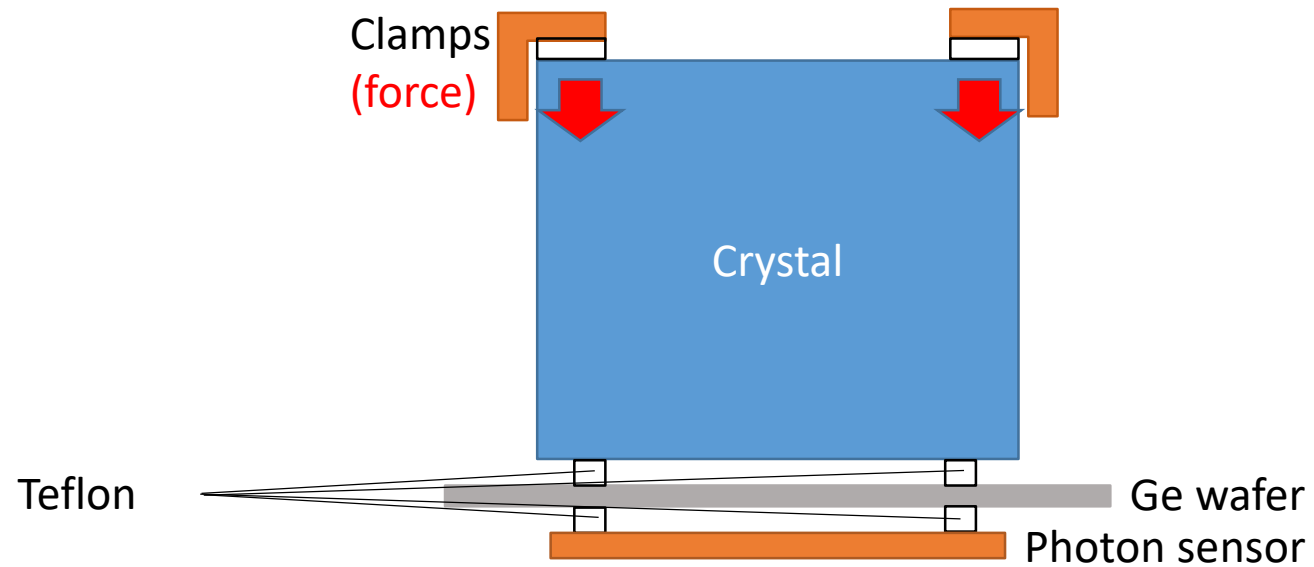


Weekly Report

2019-11-15

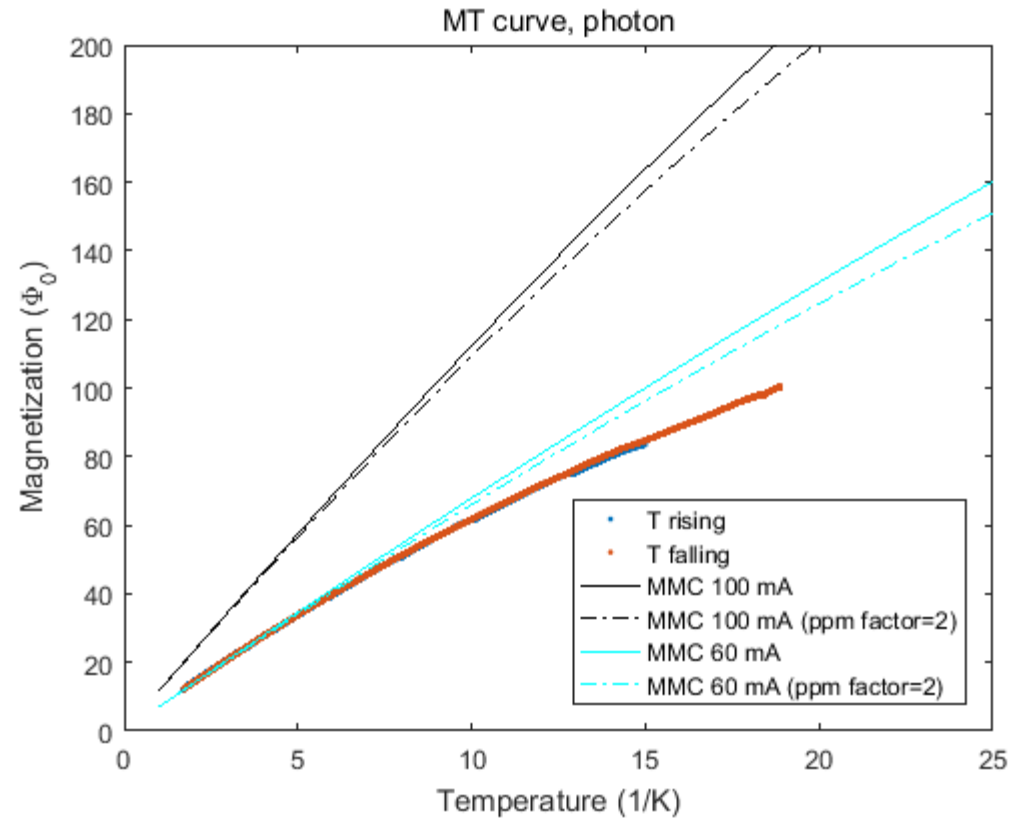
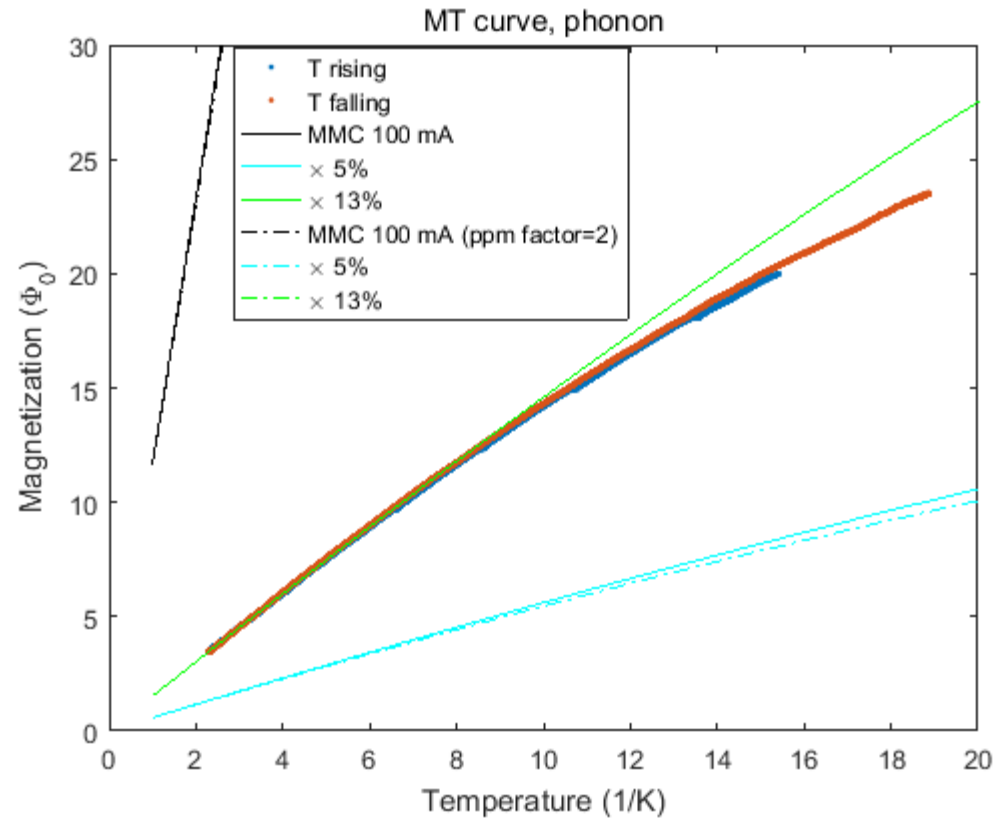
Kim, Hanbeom

Re-test



In the last test, there was large temperature fluctuation, expected to be caused by mechanical vibration.
(lack of washers)

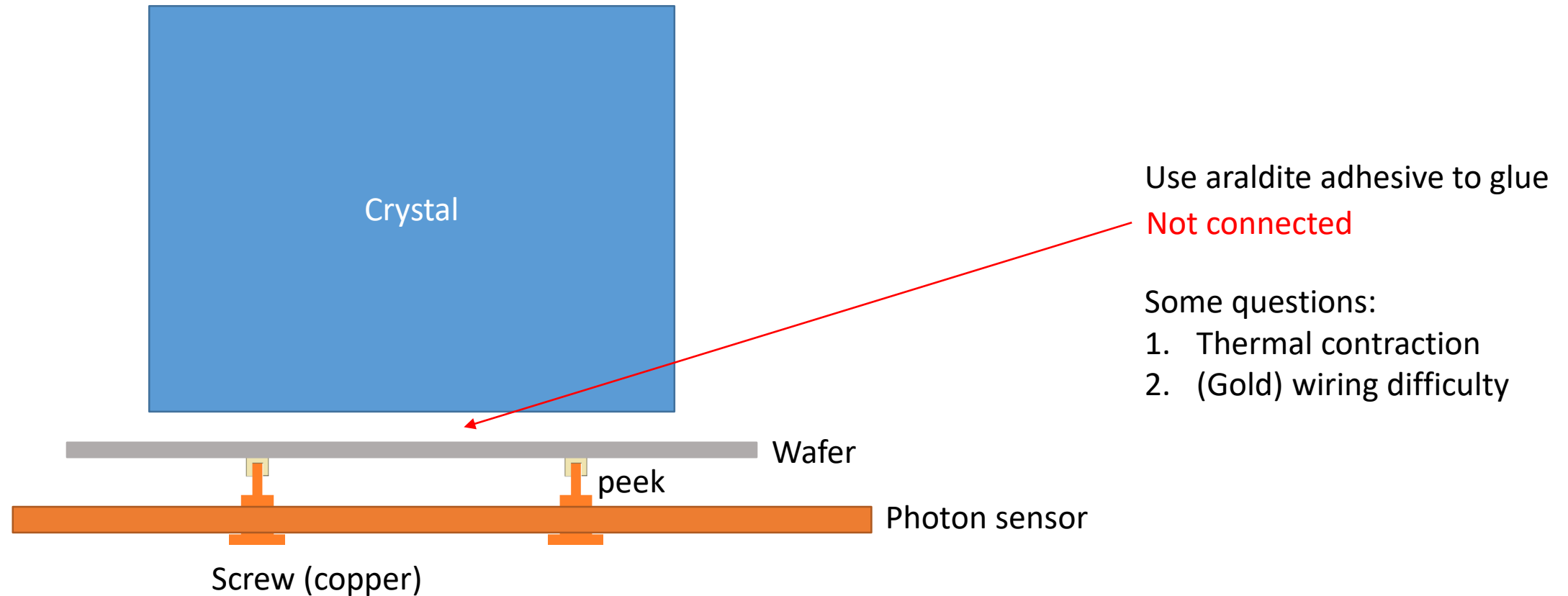
Re-test



Current base temperature: ~ 28 mK.

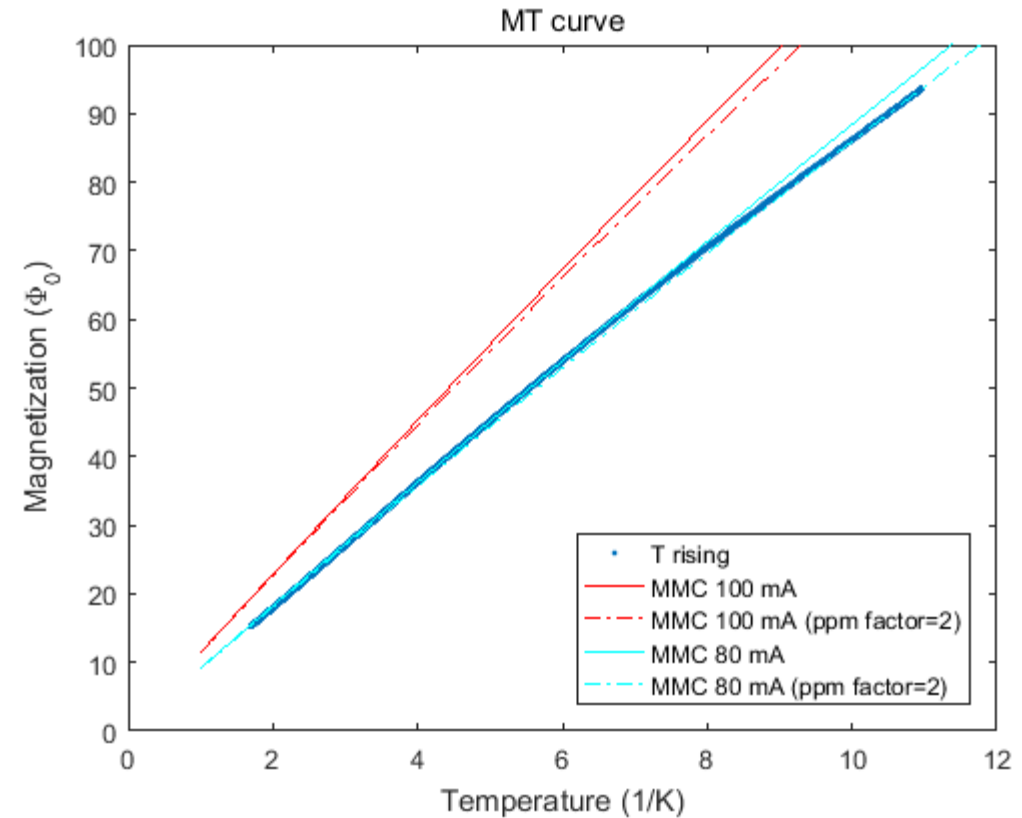
Now 30mK-PID data collection almost done. (Need to analyze quickly)

Photon sensor design



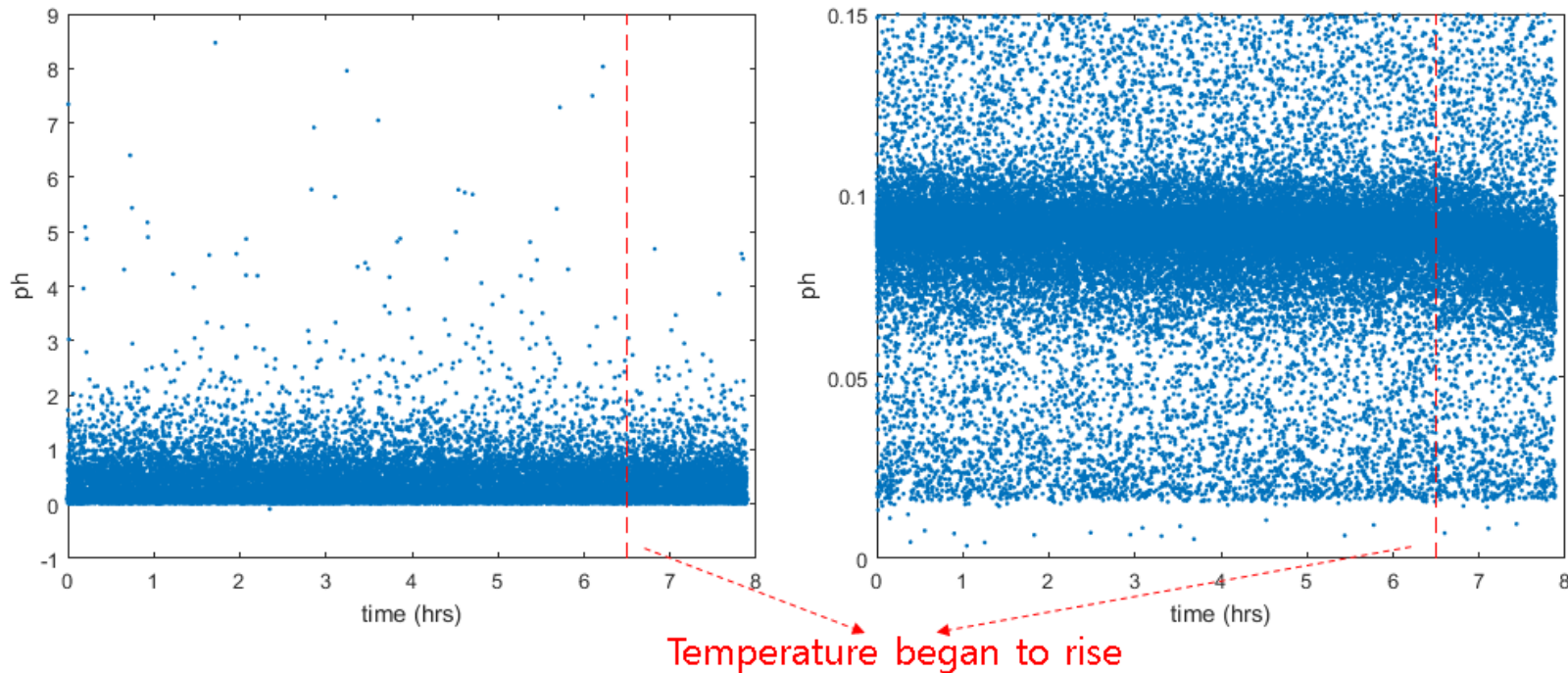
Photon sensor design – MT curve

- ADR
- MMC: Ag:Er
- Given Field Current = 100 mA
- $1/M_{IN} = 5.53 \text{ } \mu\text{A}/\Phi_0$

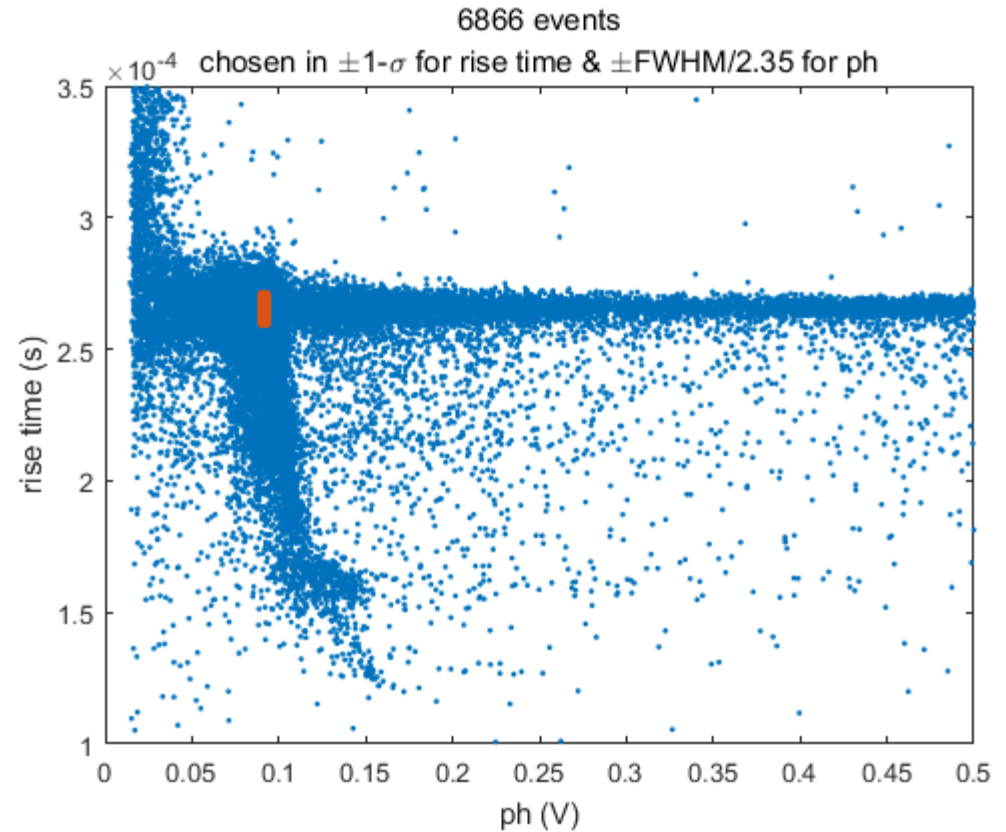
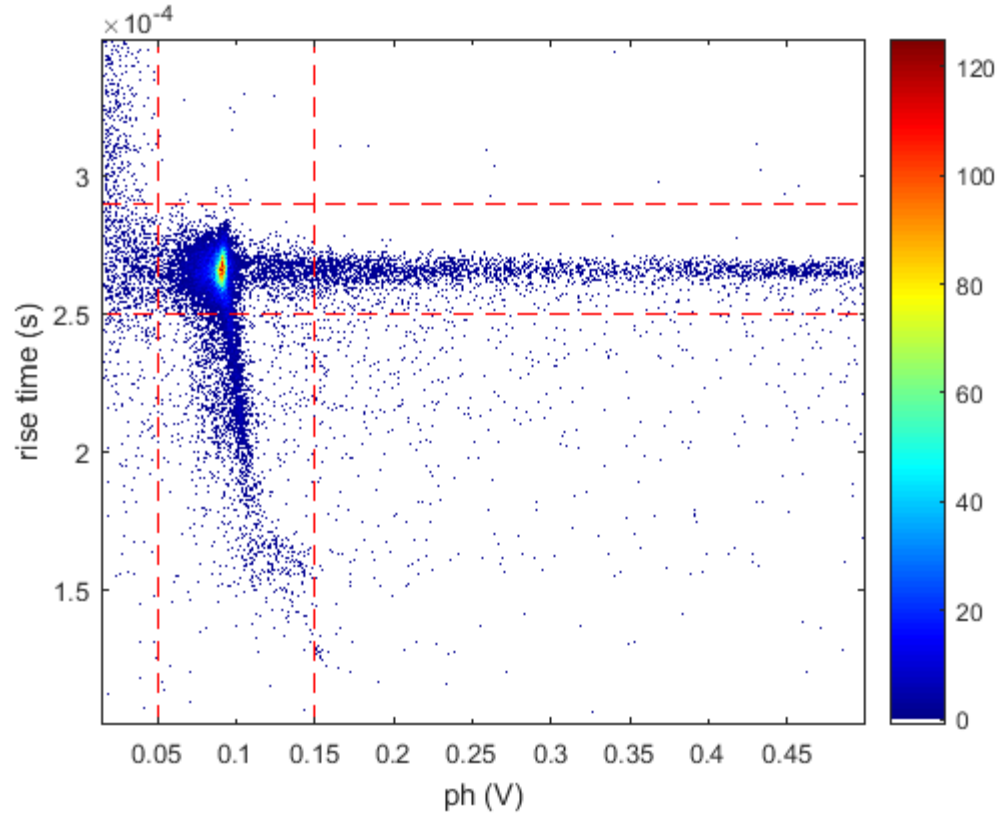


Photon sensor design – 40 mK PID

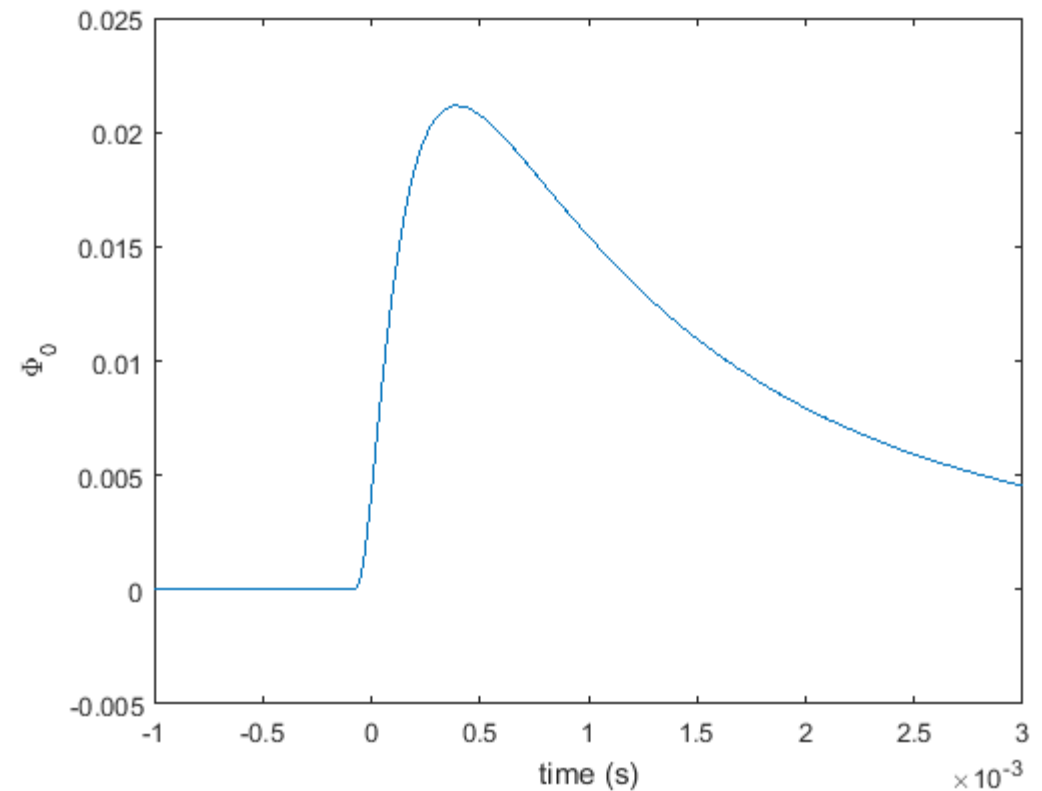
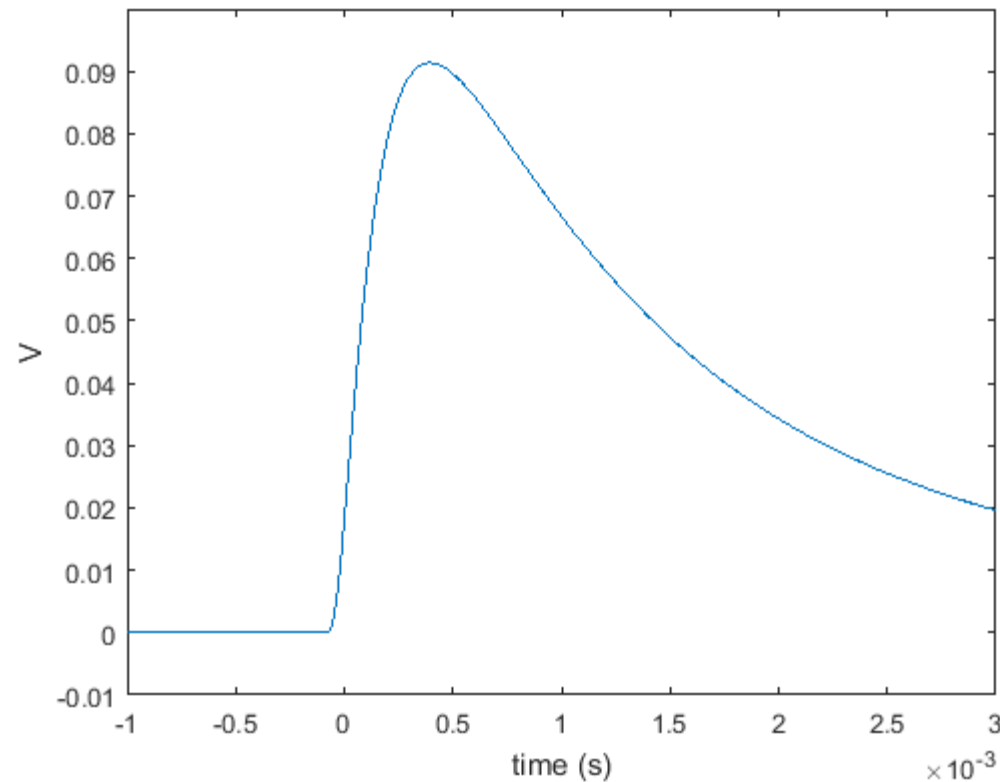
- Base Temperature: ~ 32 mK
- Am 241 source (60 keV gamma)



Photon sensor design – 40 mK PID



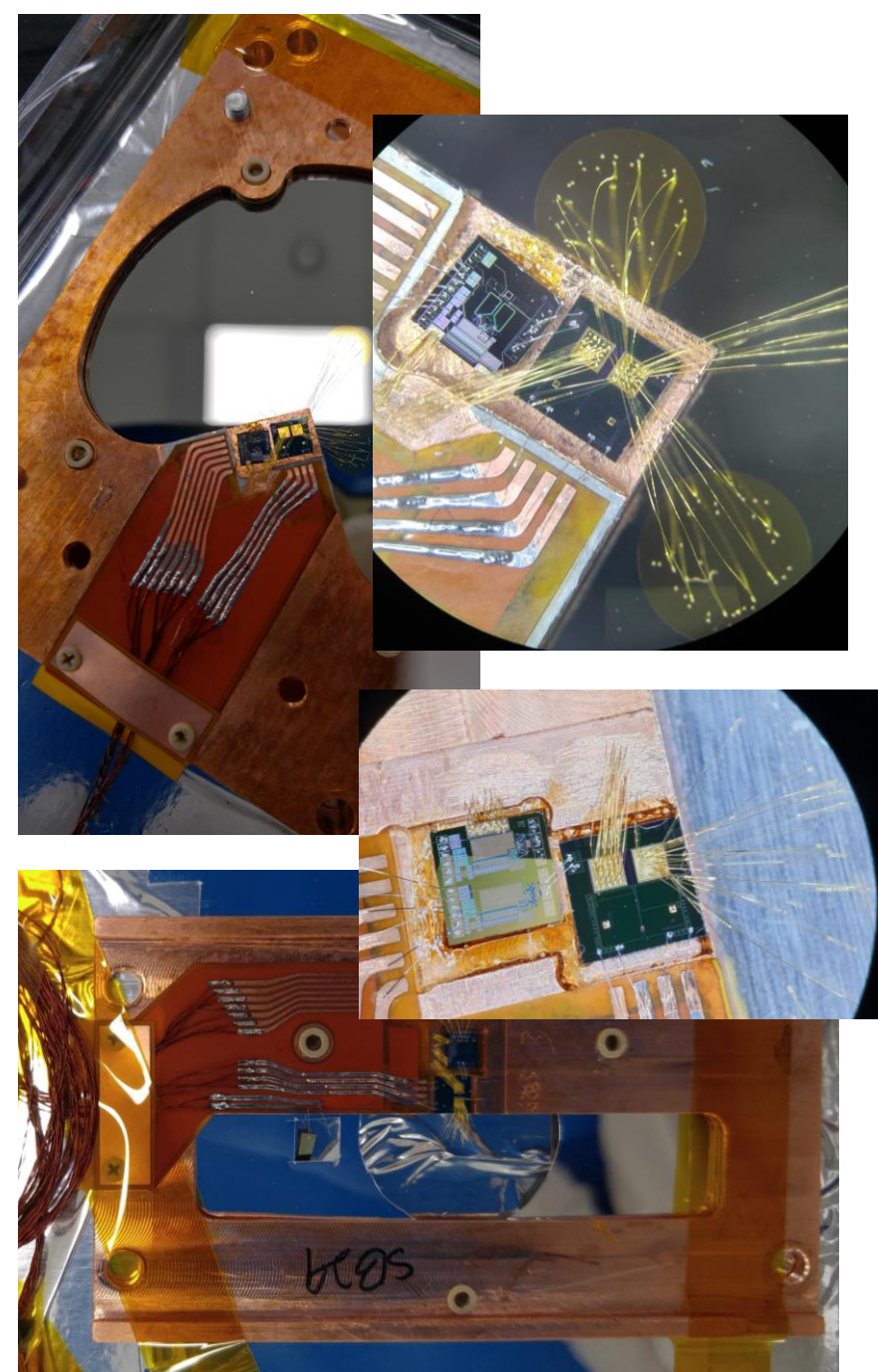
Photon sensor design – 40 mK PID



- Pulse height: 0.0914 V (0.0212 Φ_0)
- Rise time (r90-r10): 2.44e-4 s

AMoRE-I Preparation

- Detachment & Clean of AMoRE-I Pilot Sensors
- 12 SQUIDs & 12 MMCs
 - SQUID: re-use
 - MMC: Au:Er (If MMCs with Ag:Er are not enough, these will be used for AMoRE-I photon sensors)



AMoRE-I Preparation

- Sensor holder:
 - Cleaning – Photon (delivered this noon)
 - PCB attachment
 - Wire anchoring – Phonon (not students' work)
 - Sensor Chip attachment
 - 4K test