FEEM assembly

Di Venere L., Loporchio S.
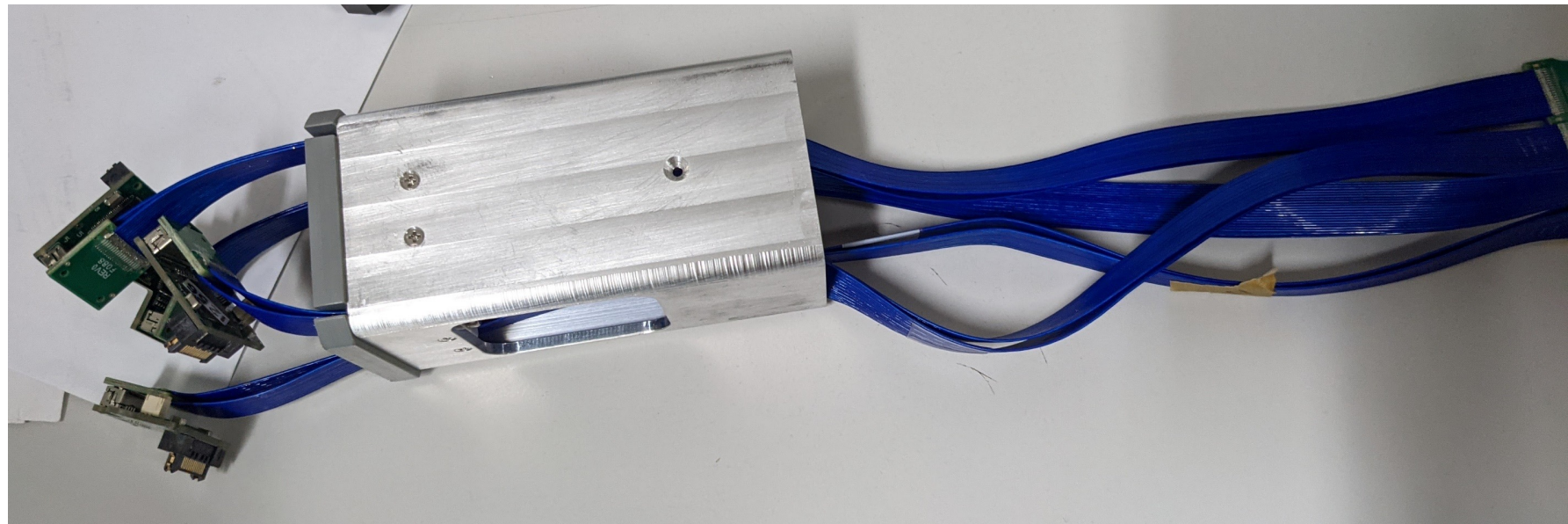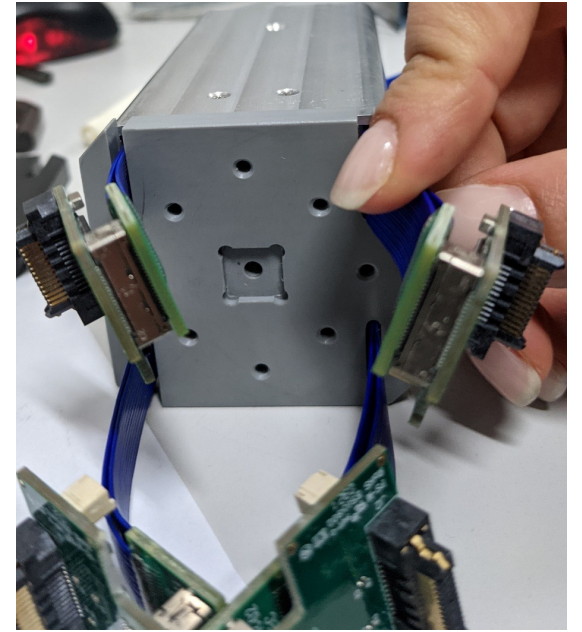
2021-10-20

Status

- Received a full cage from Arizona Oct 7th
- Mounted the full module inside the cage
- Checked what is the optimal cable length
- Noise test

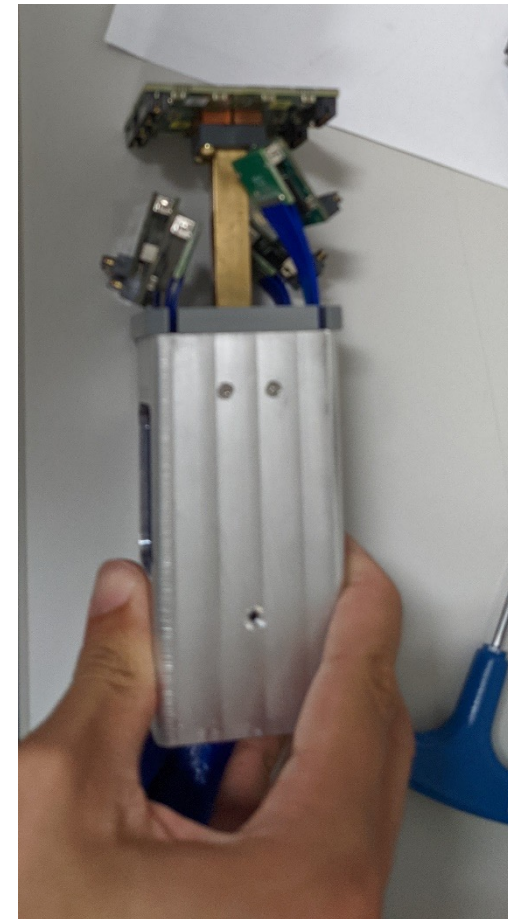# FEEM cage mounting procedure

- Open the cage

FEEM cage mounting procedure

- Open the cage

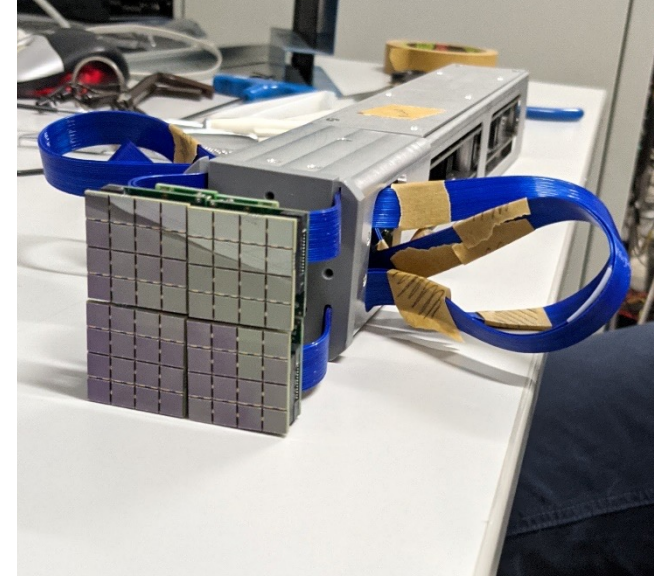- Pass the flat cables through the baseplate

FEEM cage mounting procedure

- Open the cage

- Pass the flat cables through the baseplate

- Mount the FPM on the front part of the cage
  - This could be done as first step

FEEM cage mounting procedure

- Open the cage
- Pass the flat cables through the baseplate
- Mount the FPM on the front part of the cage

- Mount the springs and connect the two parts of the cage

- Connect the cables to the FEEM

- Insert and secure the FEEM
  into the cage

- Close the cage

FEEM cage mounting procedure - summary

- Open the cage
- Pass the flat cables through the baseplate
- Mount the FPM on the the front part of the cage
- Mount the springs and connect the two parts of the cage
- Connect the cables to the FEEM
- Insert and secure the FEEM into the cage
- Close the cage

Issues

- Is black baseplate correct?
- Mounting standoffs could be tricky because of the different lengths
- Springs need to be mounted before the module is placed, otherwise it becomes very difficult due to low clearance
- When placing the module inside the cage, be careful with standoffs/module connector/springs
- Flat cables must be plugged before the module is inserted in the cage
- A support/protection for FPMs could be useful to prevent damage to the SiPMs

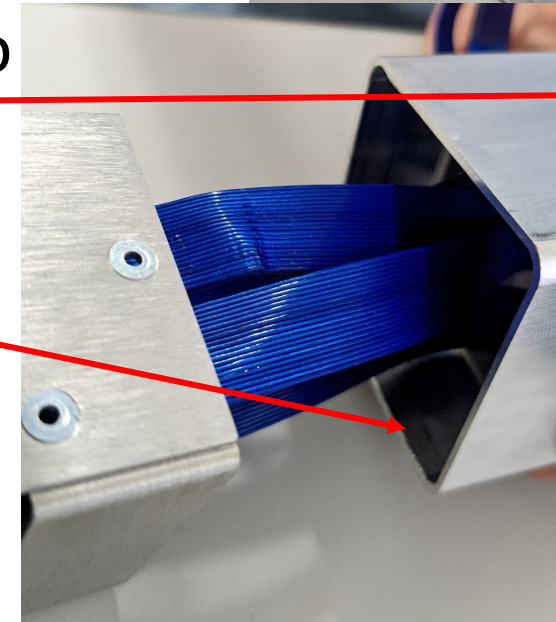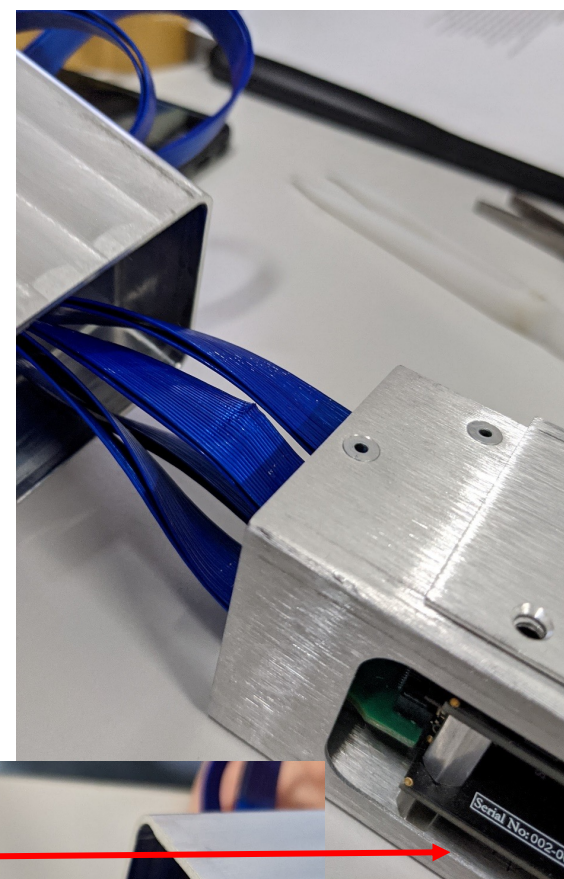# Issues - 1

- Is black baseplate correct?
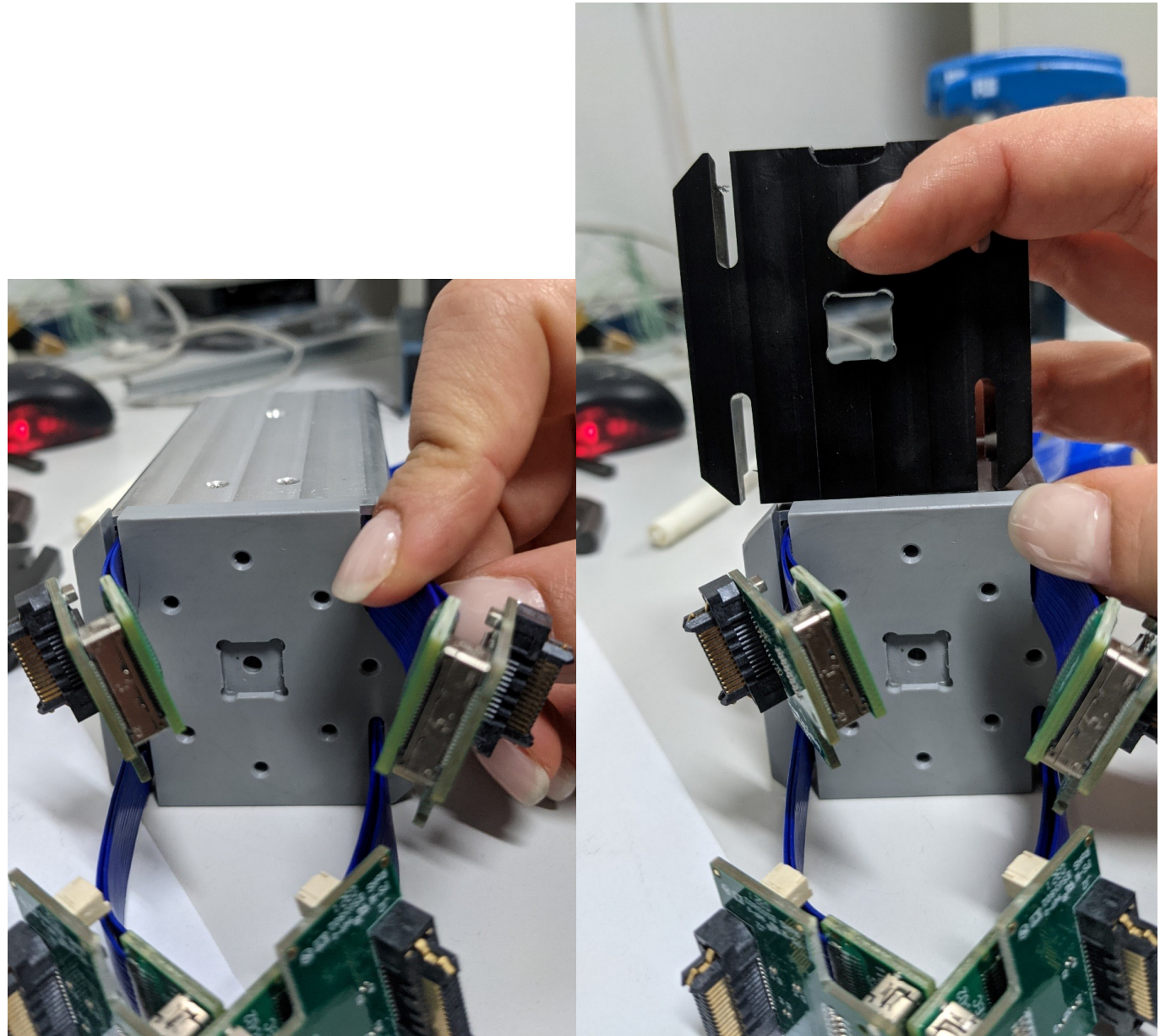
Issues - 2

- Is black baseplate correct?
- Mounting standoffs could be tricky because of the different lengths

Issues - 3

- Is black baseplate correct?

- Mounting standoffs is tricky because of the different lengths

- Springs need to be mounted before the module is placed, otherwise it becomes very difficult due to low clearance

Issues - 4

- Is black baseplate correct?
- Mounting standoffs is tricky because of the different lengths
- Springs need to be mounted before the module is placed, otherwise it becomes very difficult due to low clearance
- When placing the module inside the cage, be careful with standoffs/module connector/springs
- Flat cables must be plugged before the module is inserted in the cage

Issues - 5

- Is black base
- Mounting sta
- Springs need
  becomes ve
- When placing the module inside the
  standoffs/module connector/springs
- Flat cables must be plugged before the module is inserted in the cage

- A support/protection for FPMs could be useful to prevent damage to the SiPMs
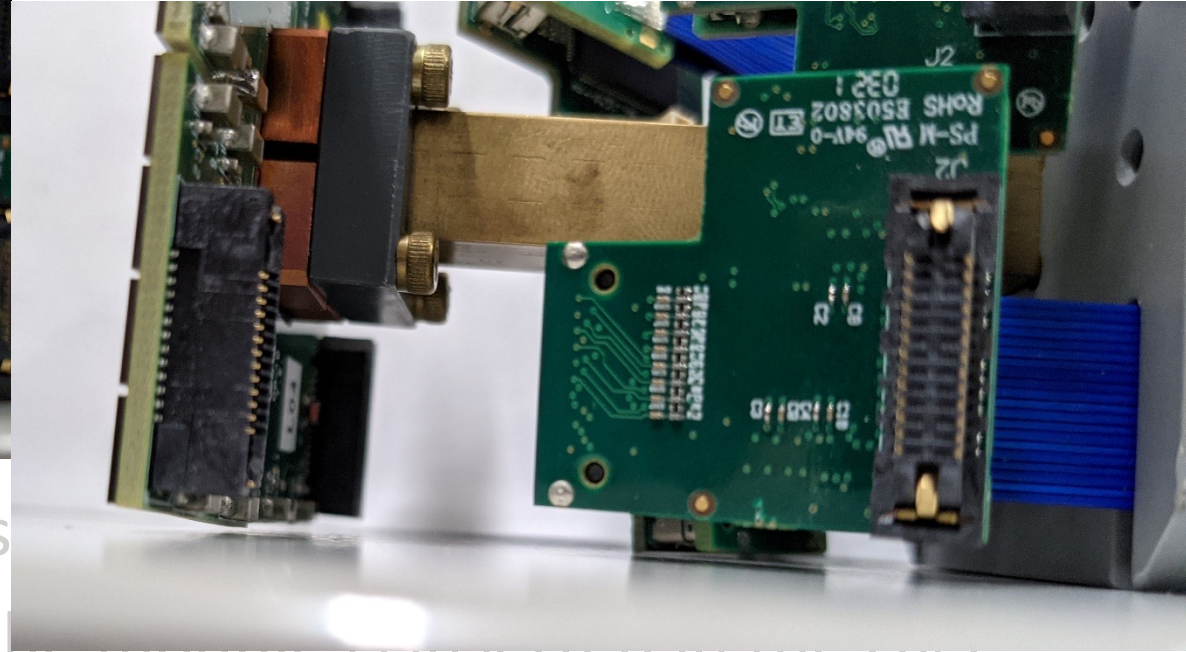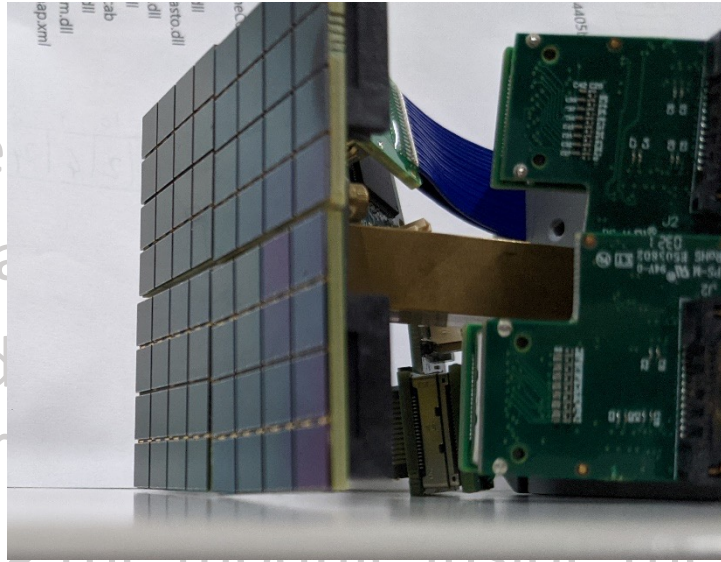
Cable length
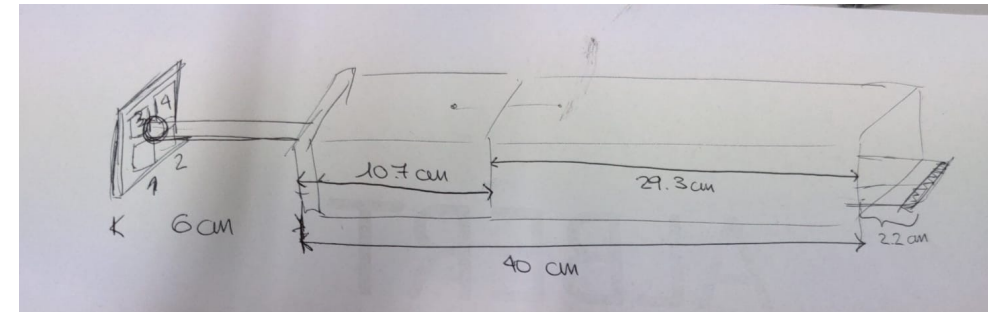
- While mounted the module we made the extra cable pass through the side holes

- Afterwards, we measured the extra cable:
  - When the module is fully inserted, we have 19 cm≈7.5 inch extra cable
  - In order to plug the connectors, some cable should be left: we think that 4 cm are enough to guarantee space to plug the connectors before placing the FEEM inside the cage
  - So we should 'remove' approx. 15 cm ≈ 6 inch from the cable we have now
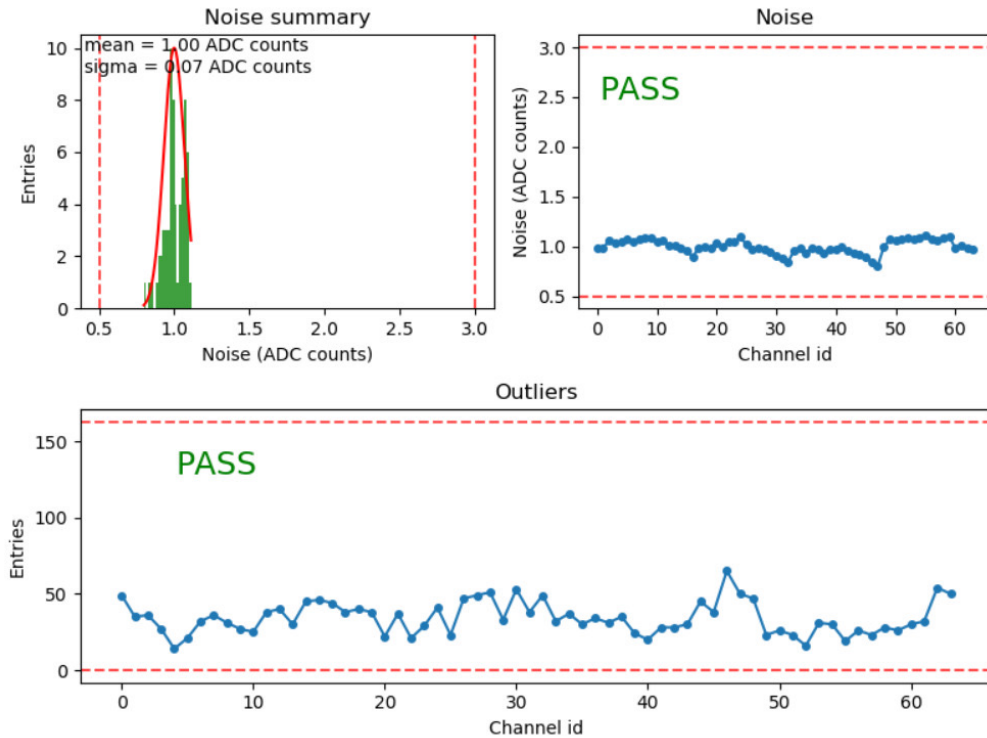 - New length should be: 14 inch – 6 inch = 8 inch
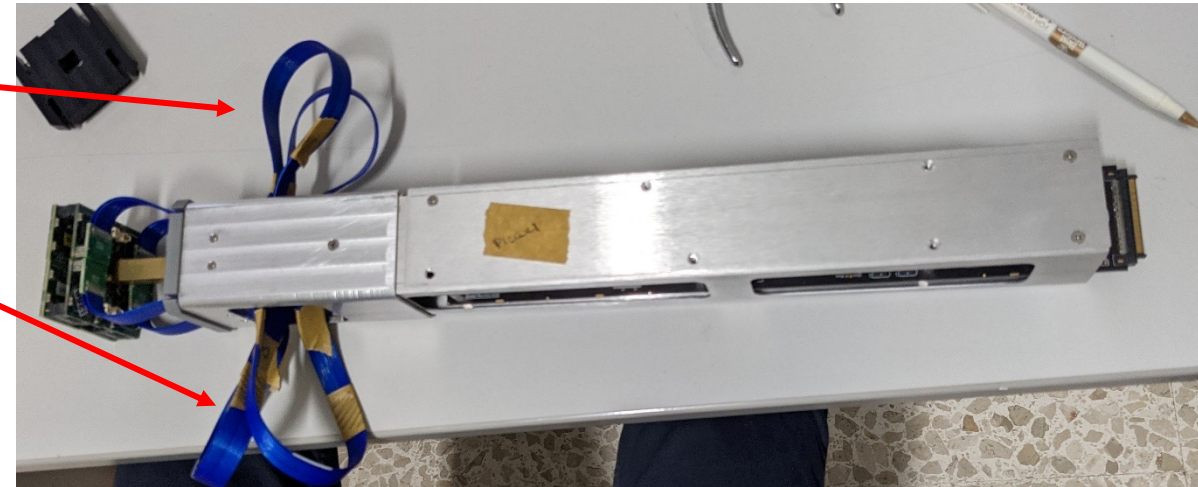
Cable length - summary

- Length from FPMs to connector: ≈6.5 inch

- Minimum length for mounting: 8 inch

- We could use a few more cm of cable to make the mounting procedure easier, but... do we have enough space ?
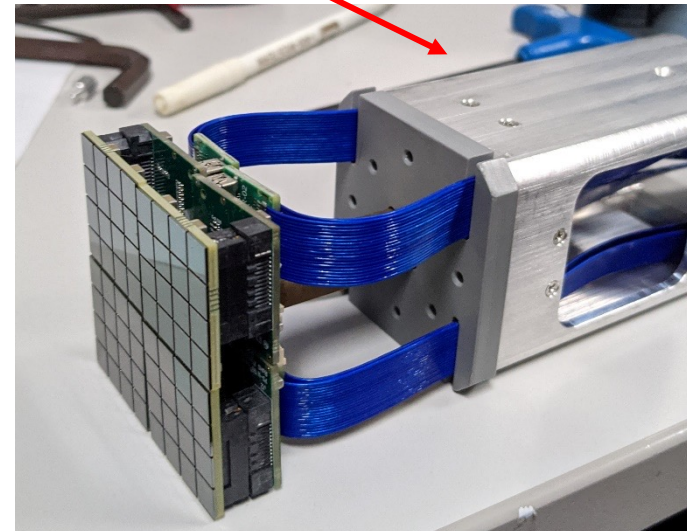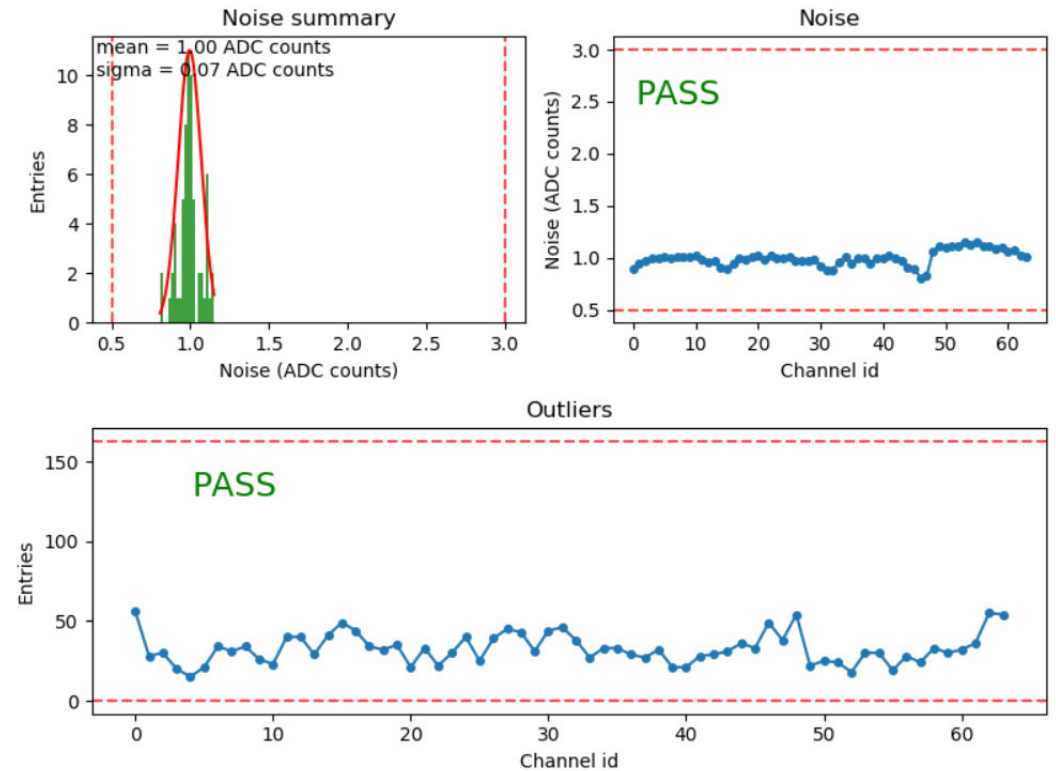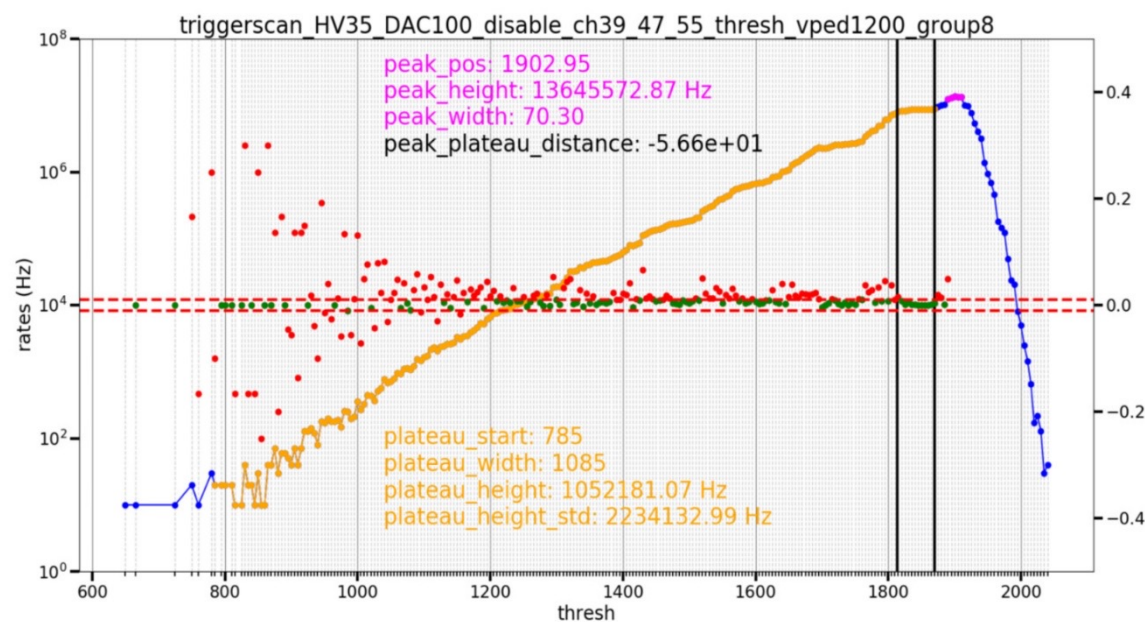
Noise test - pedestal

Without cage

With cage

Noise test – rate scan

Without cage

With cage