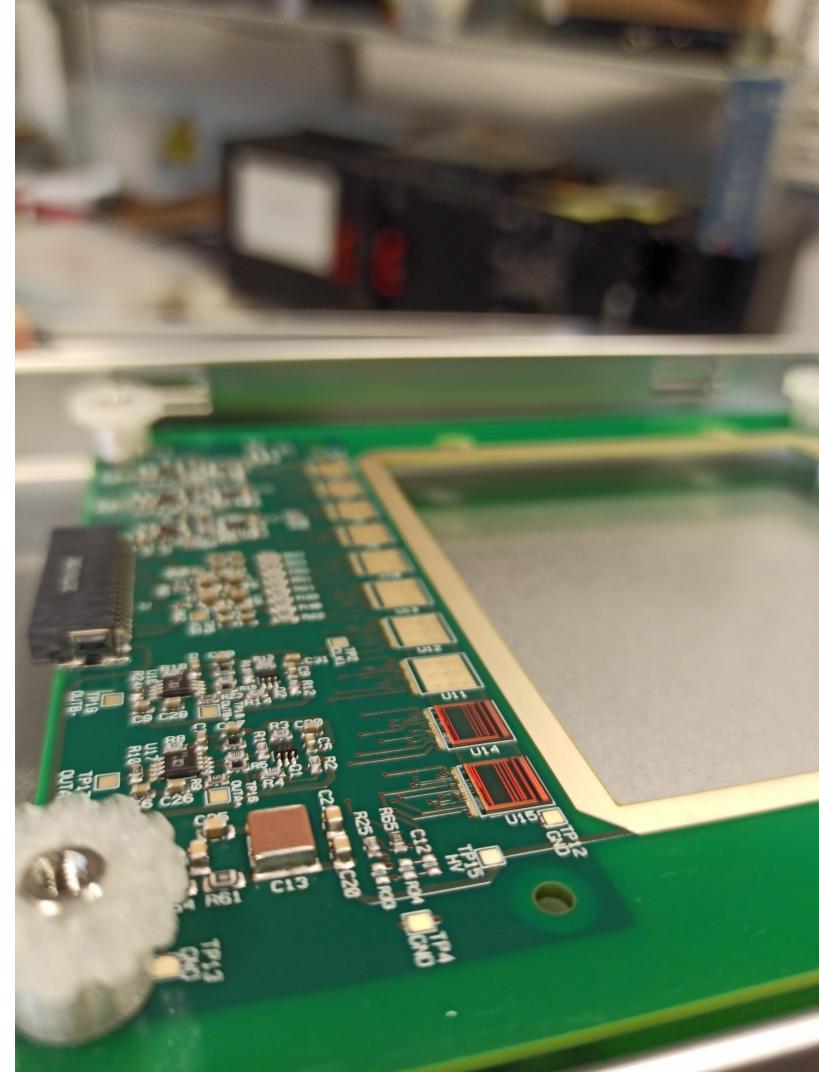
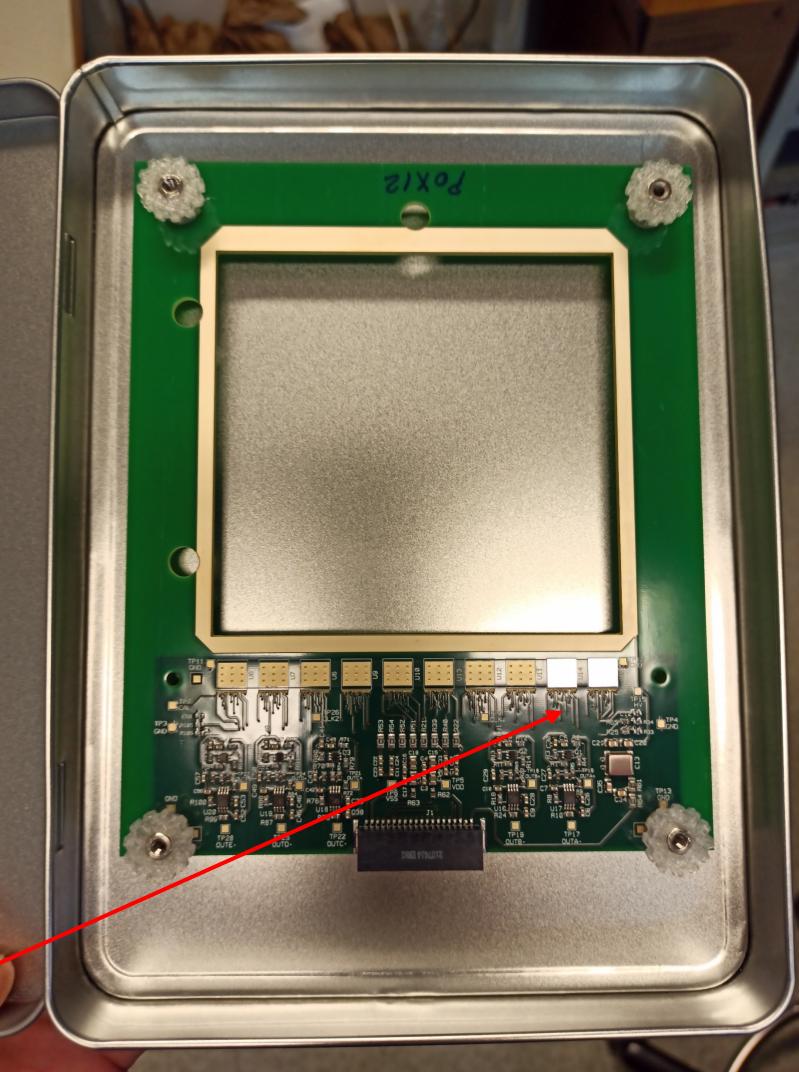
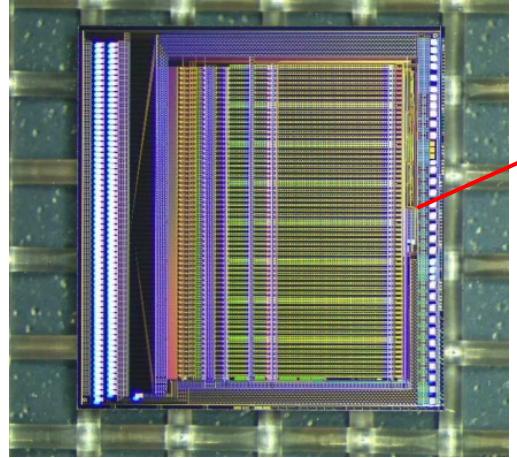


# Test on New VA1140

11/Mar/2022

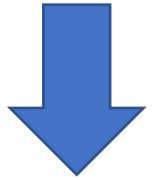
G. Ambrosi, M. Barbanera, M. Caprai, M. D'Antonio,  
M. Duranti, M. Ionica, G. Silvestre

1. Glue 2 "VA1140"  
on FOOT PCB Hybrid

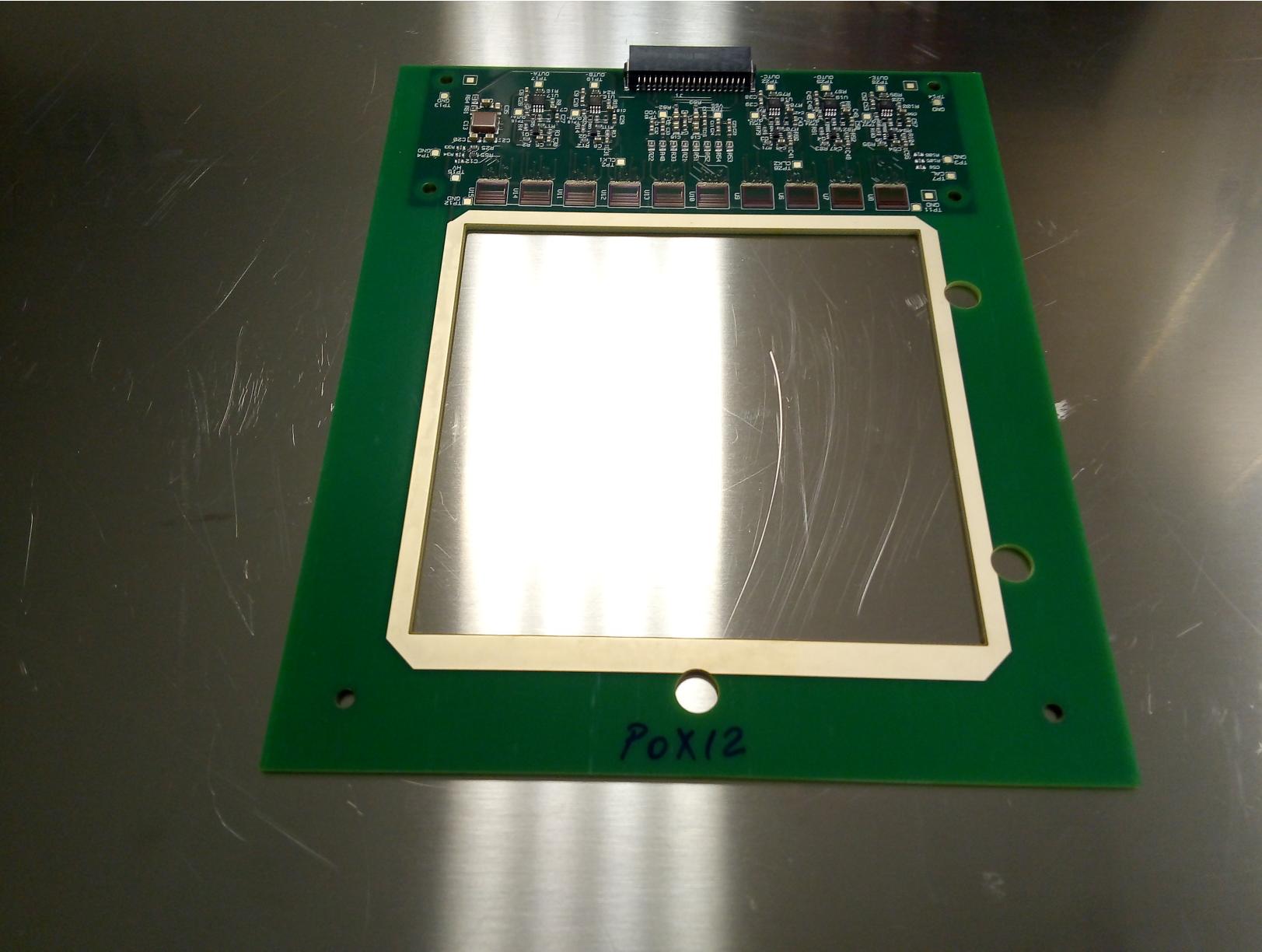


→ everything is fine

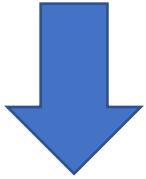
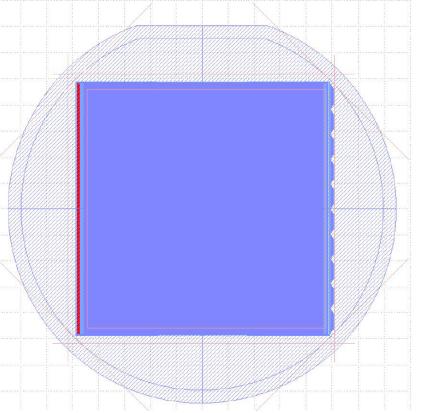
2. Glue the other 8  
"VA1140"



Calibration with 10 VA  
(but no silicon)



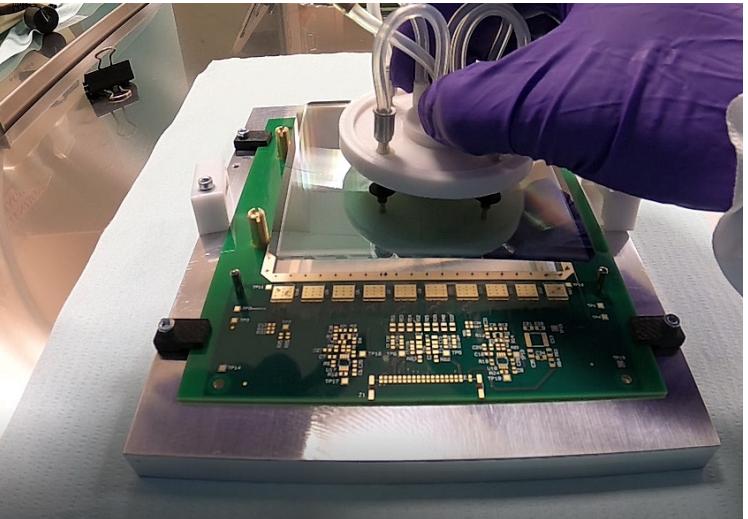
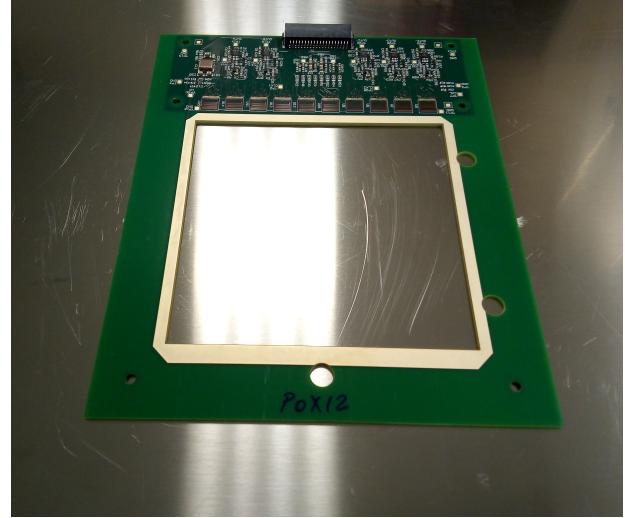
### 3. Gluing a FOOT silicon sensor



Thickness	150um
Overall dim	102.5mmx103.5mm
Active area	96mm x 96mm
Strip pitch	50 um
Readout pitch in Foot	150 um
Number of readout strips	640



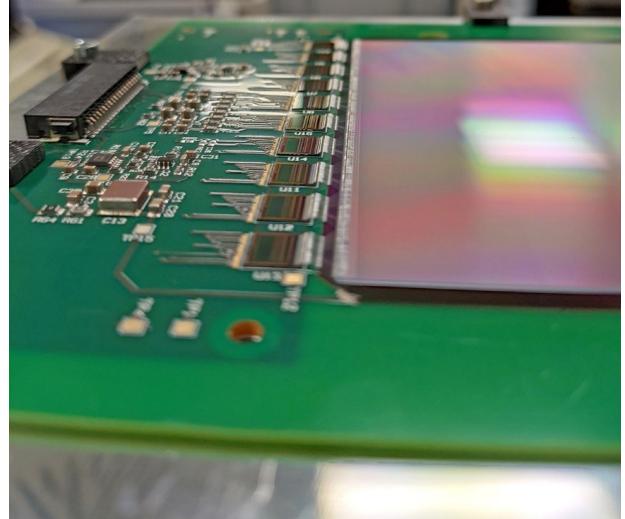
Dispensing the conductive glue (Epotek EJ2189) and siliconic glue (DC 3145 grey) for the silicon sensor gluing on PCB



Calibration  
with  
sensors

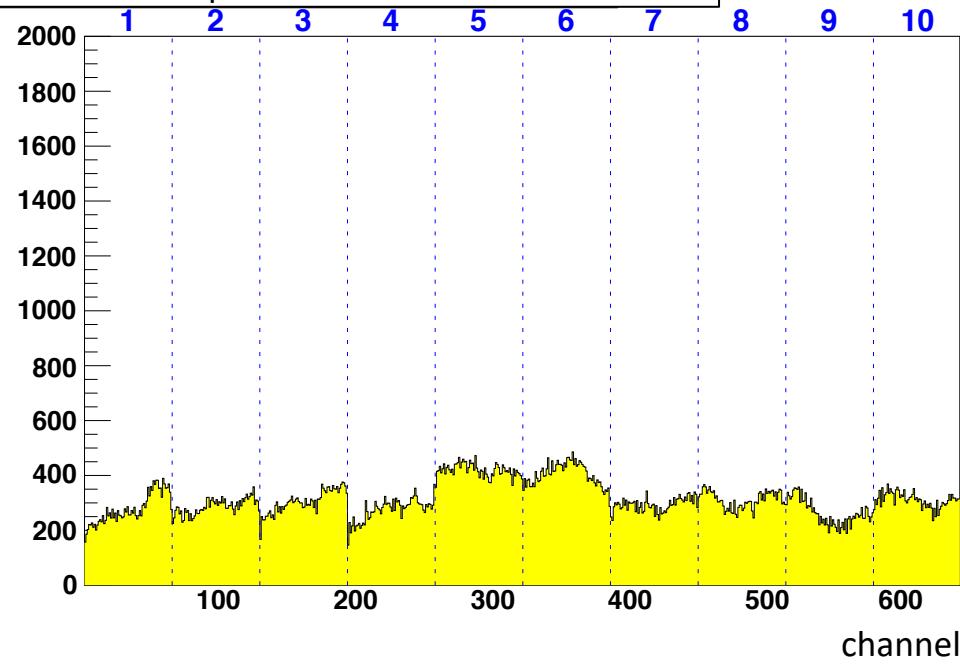


Positioning the silicon sensor on the PCB

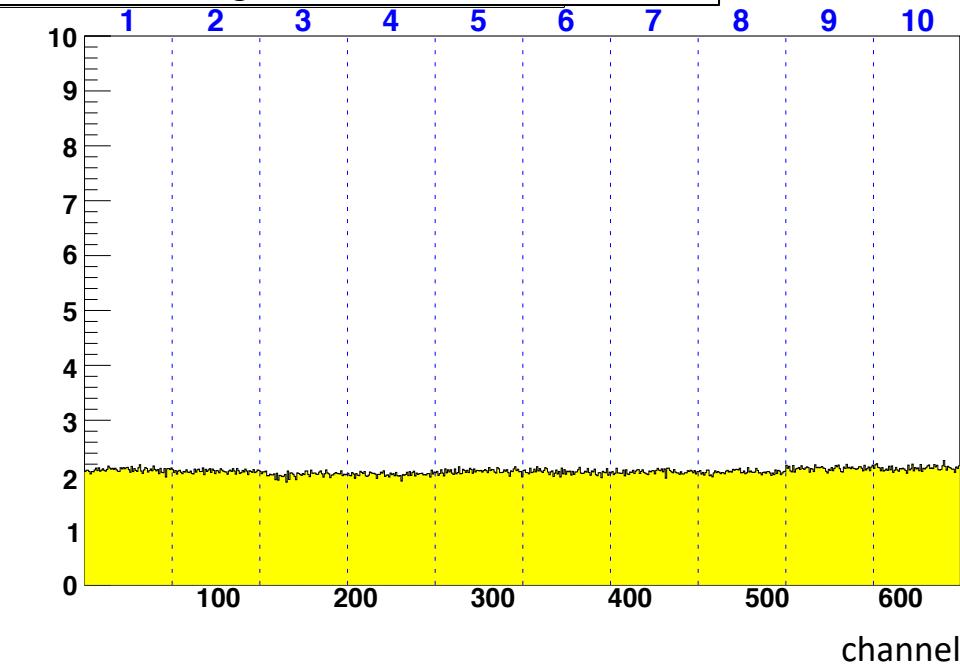


Performing wire bonding

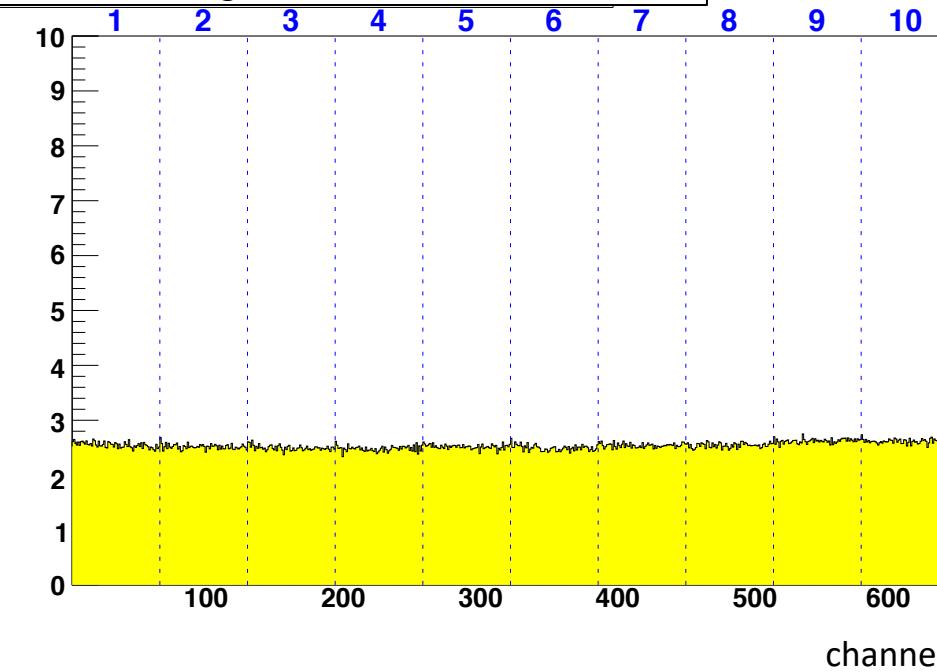
FOOT-newVA: pedestals

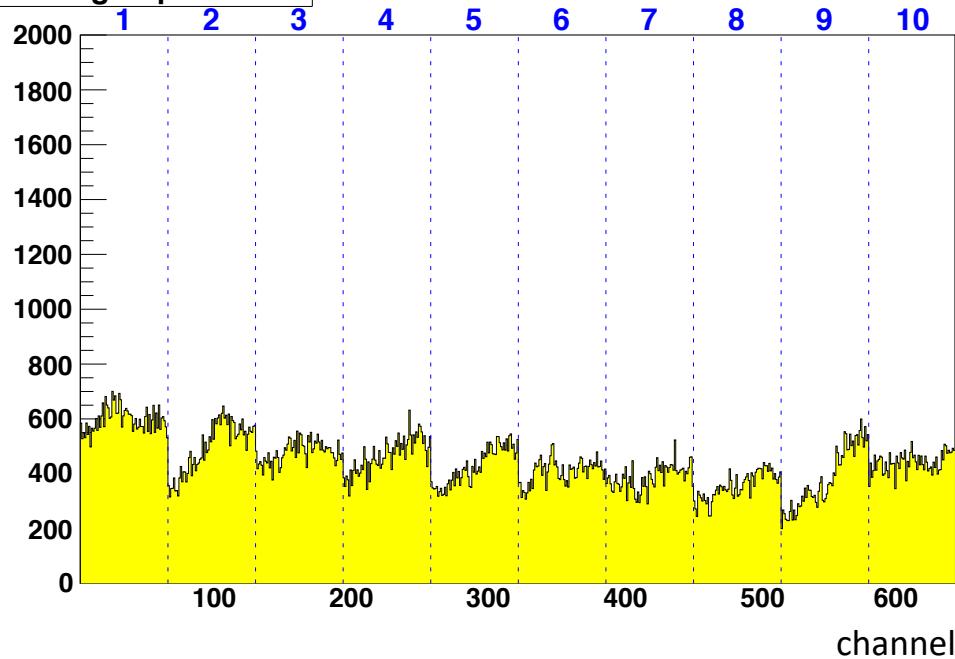
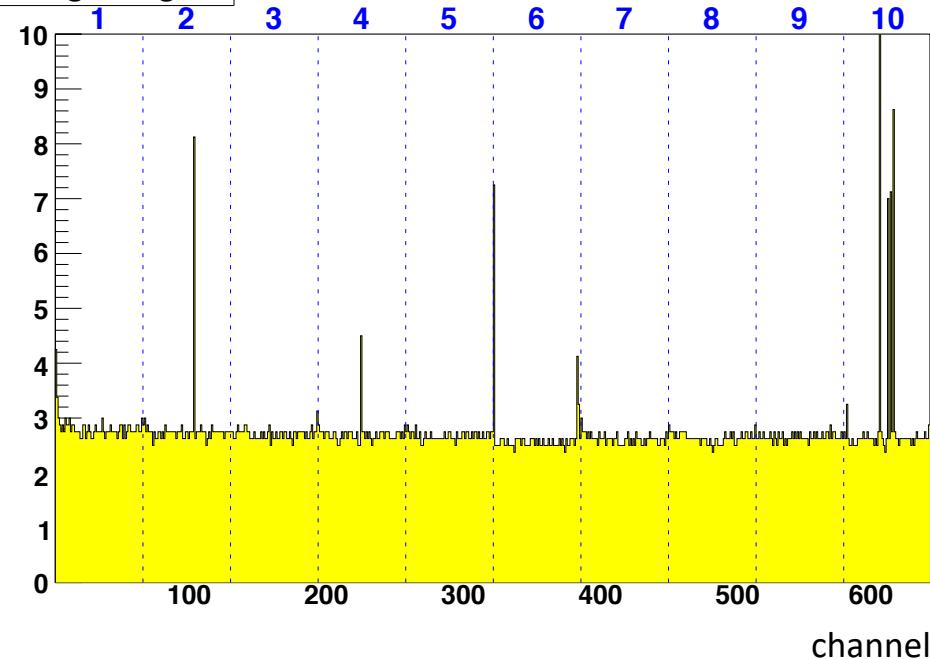
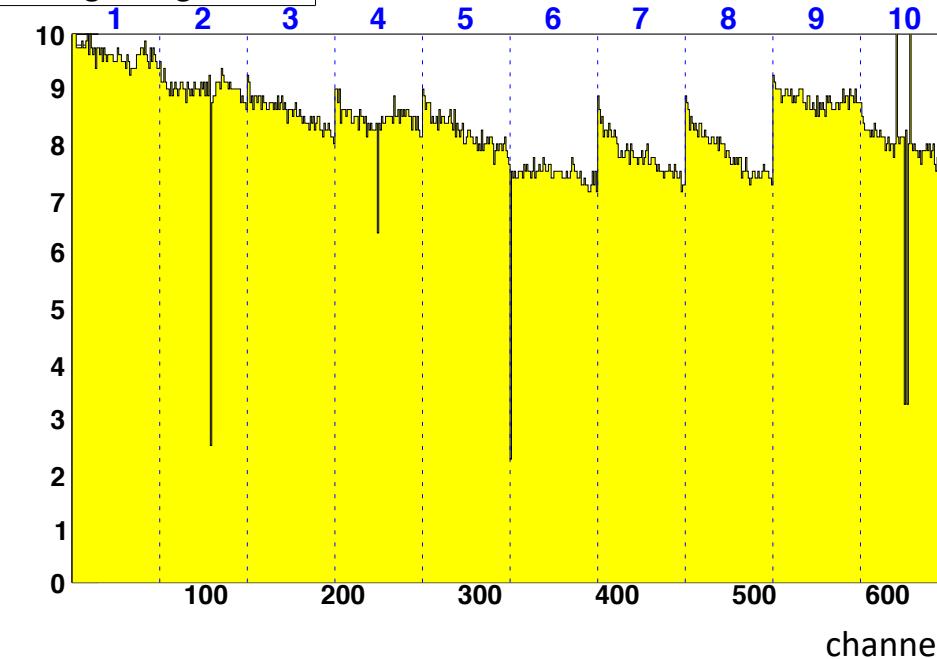


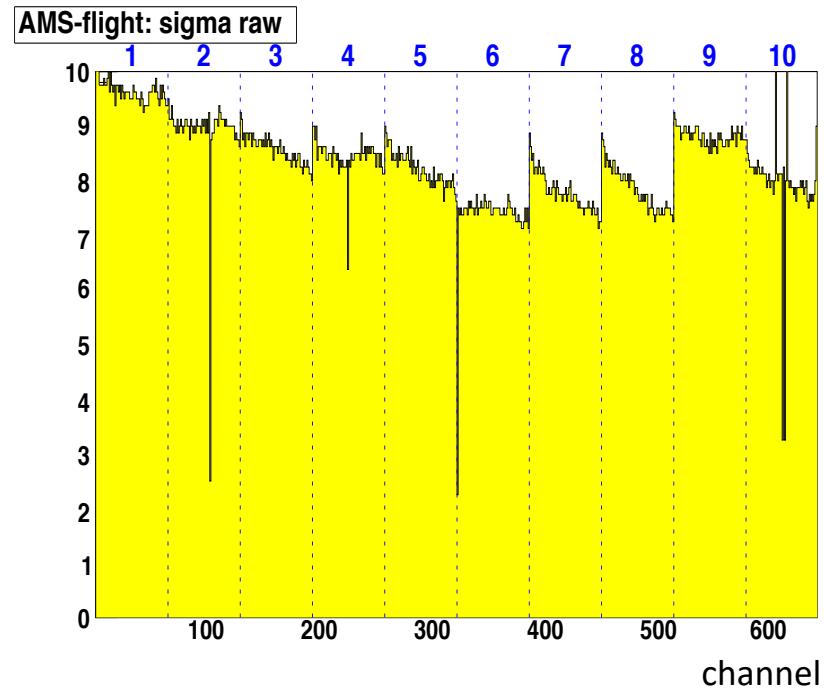
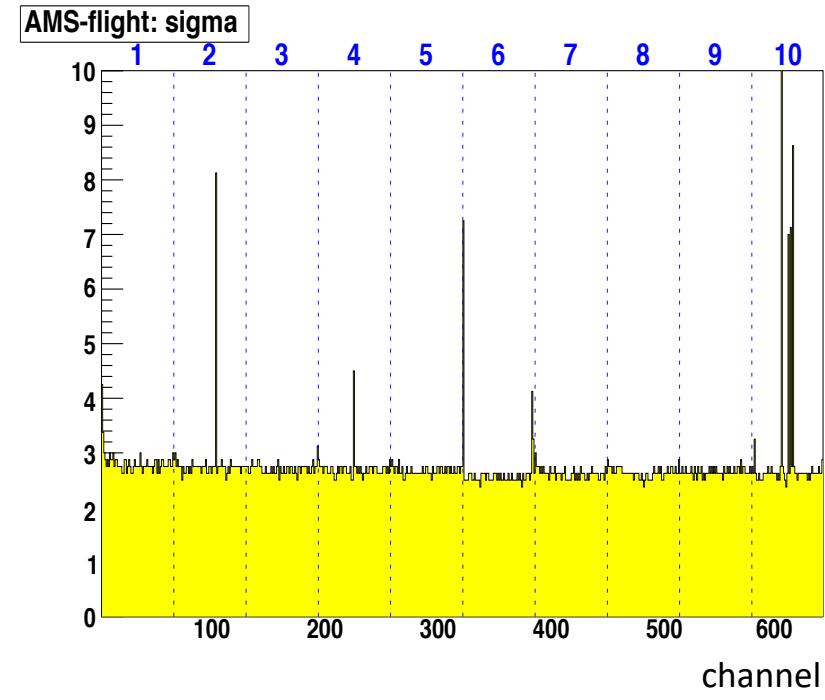
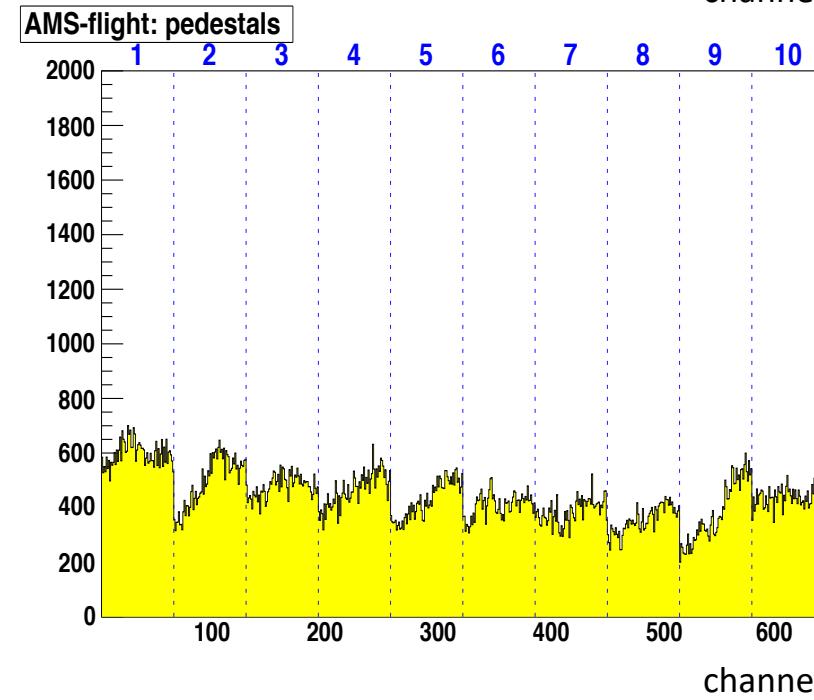
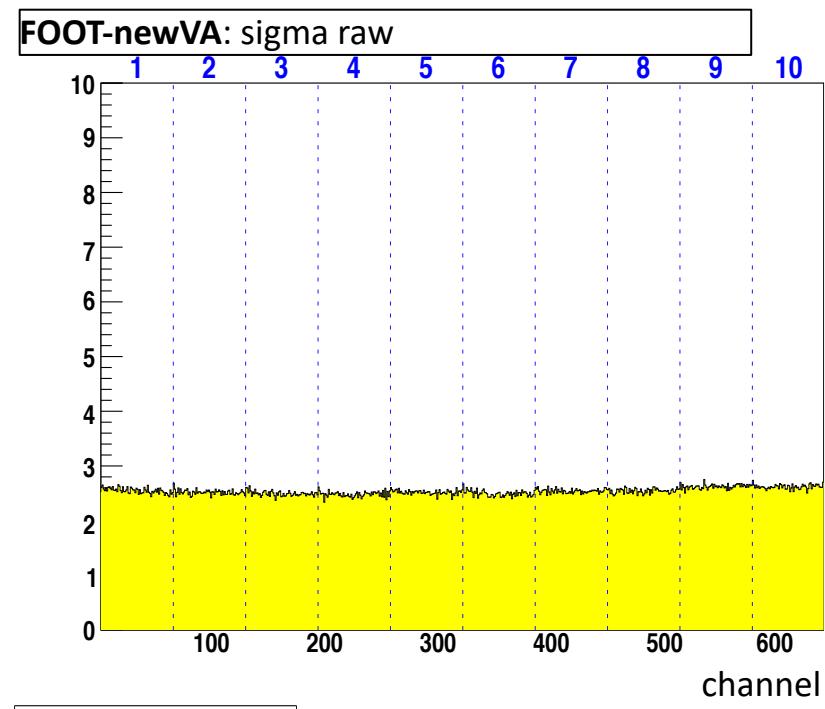
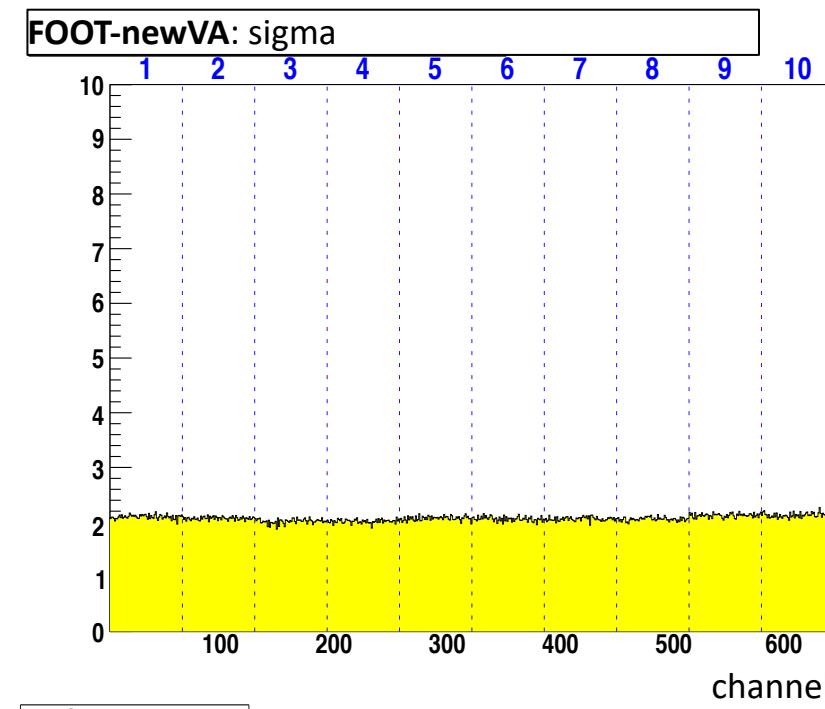
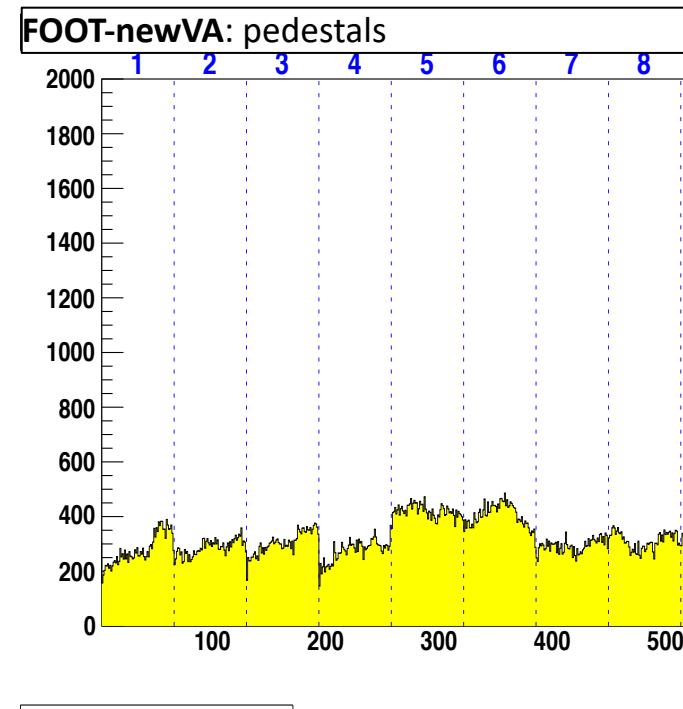
FOOT-newVA: sigma



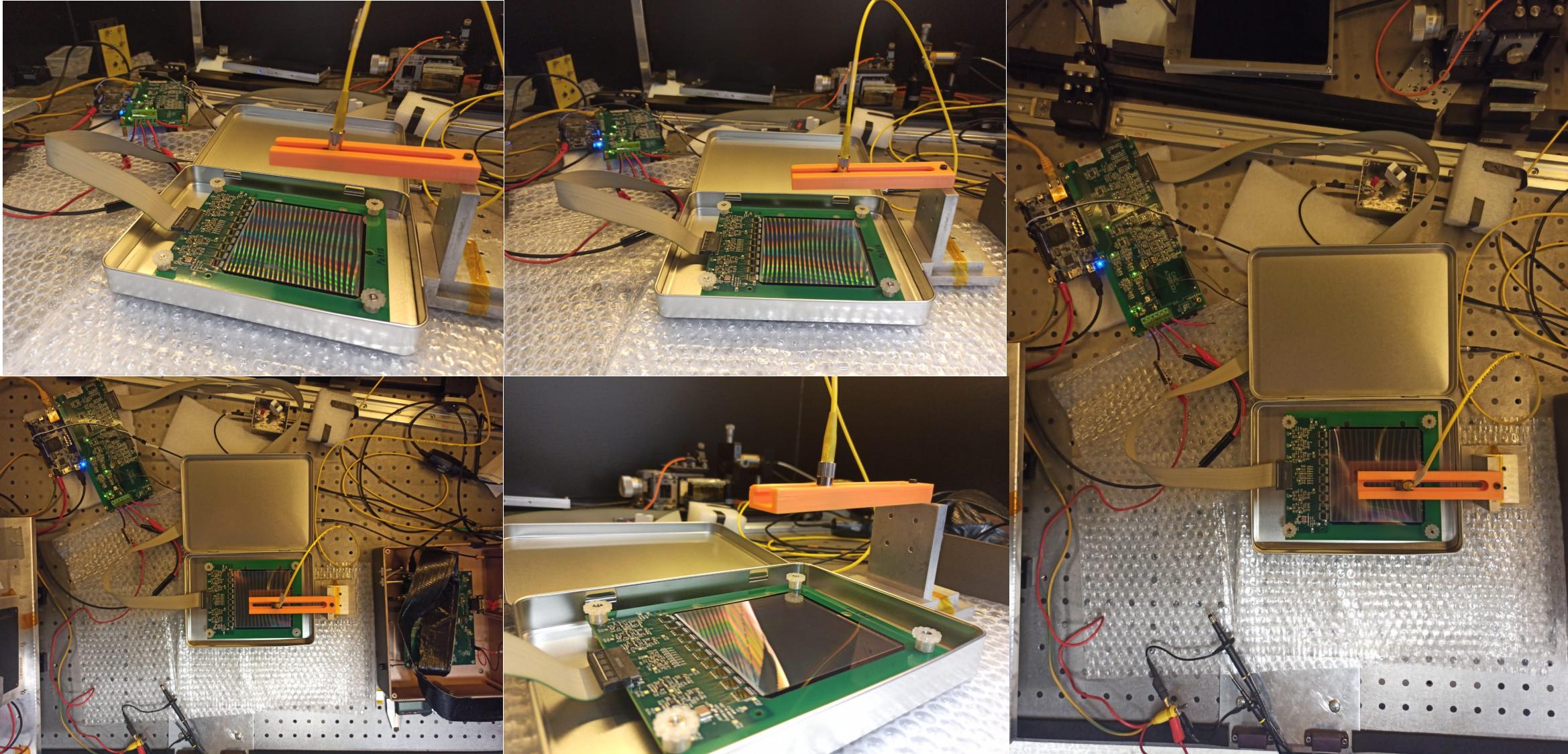
FOOT-newVA: sigma raw



**AMS-flight: pedestals****AMS-flight: sigma****AMS-flight: sigma raw**

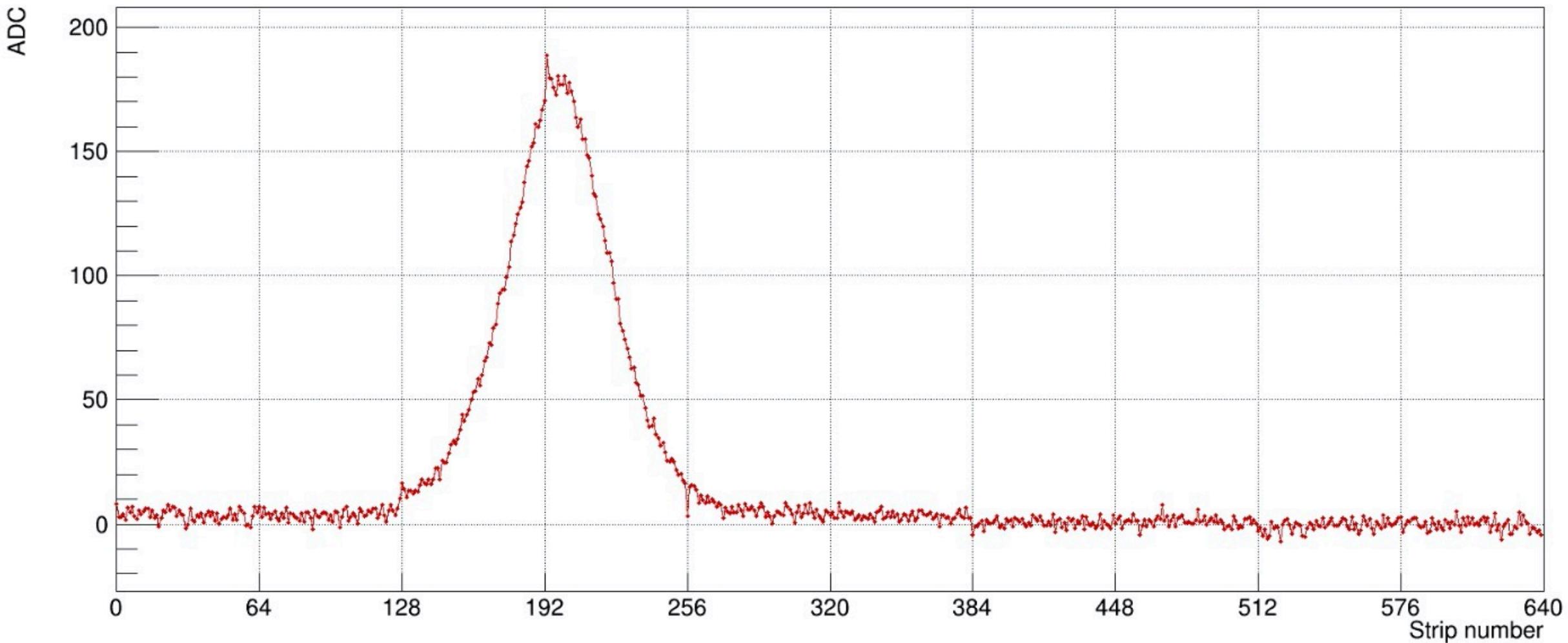


### 3. Test with laser

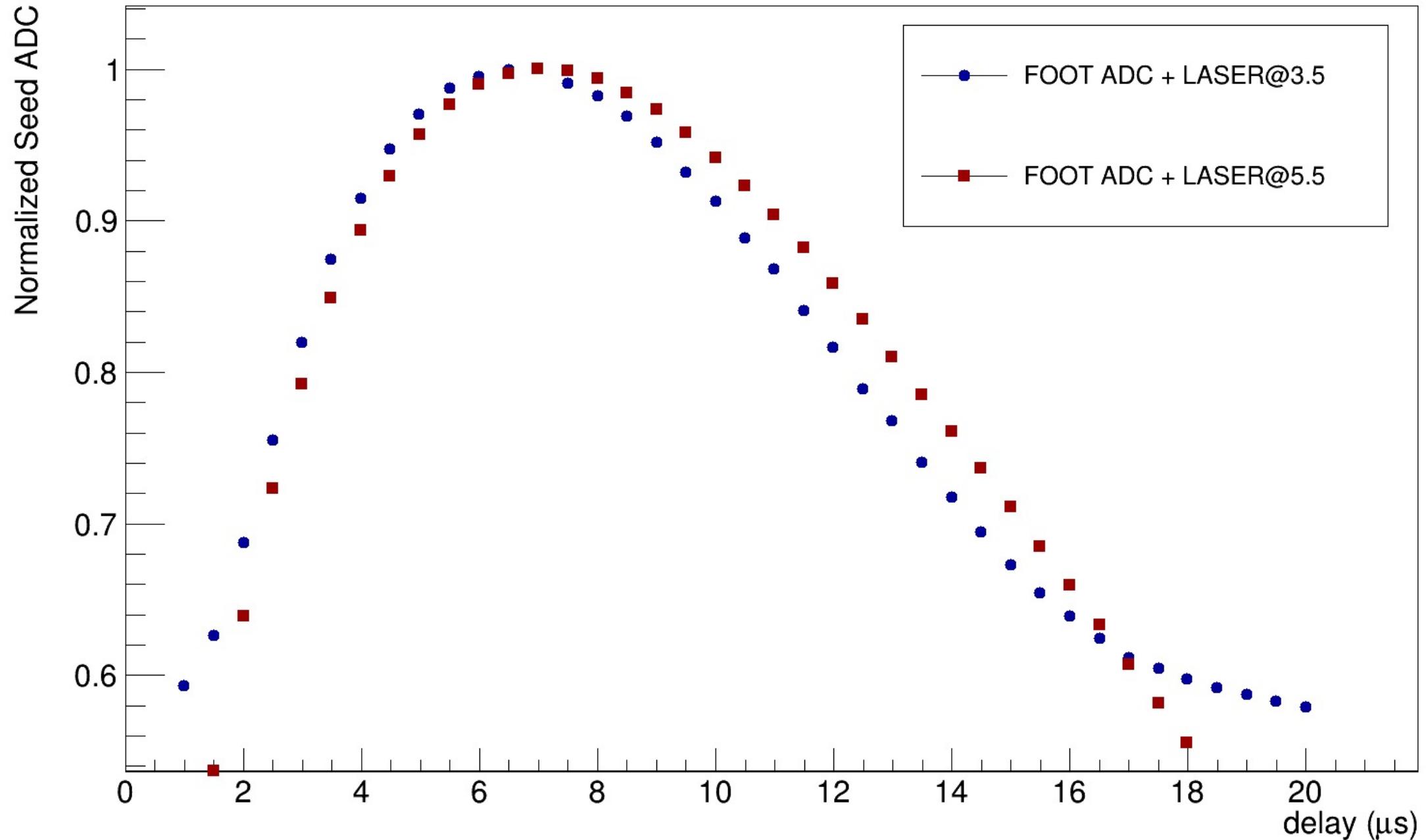


### 3. Test with laser

Event number 10 Detector: 1



### 3. Scan in "trigger to hold"



#### 4. Power consumption

Current: measured (datasheet) @ voltage → power consumption

$V_{DD}$ : 1.67 mA (1.3 mA) @ 1.5V → 2.505 mW

$V_{SS}$ : 6.37 mA (9.5 mA) @ -2.0V → 12.74 mW

Total consumption per chip: 15.245 mW

Consumption per channel: ~ 0.25 mW

Total consumption per ladder ~ 0.26 W

Total consumption per L0 (72 ladders) ~ 18 W