

eRD109 Update

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Remaining questions

1. Barrel HCal:

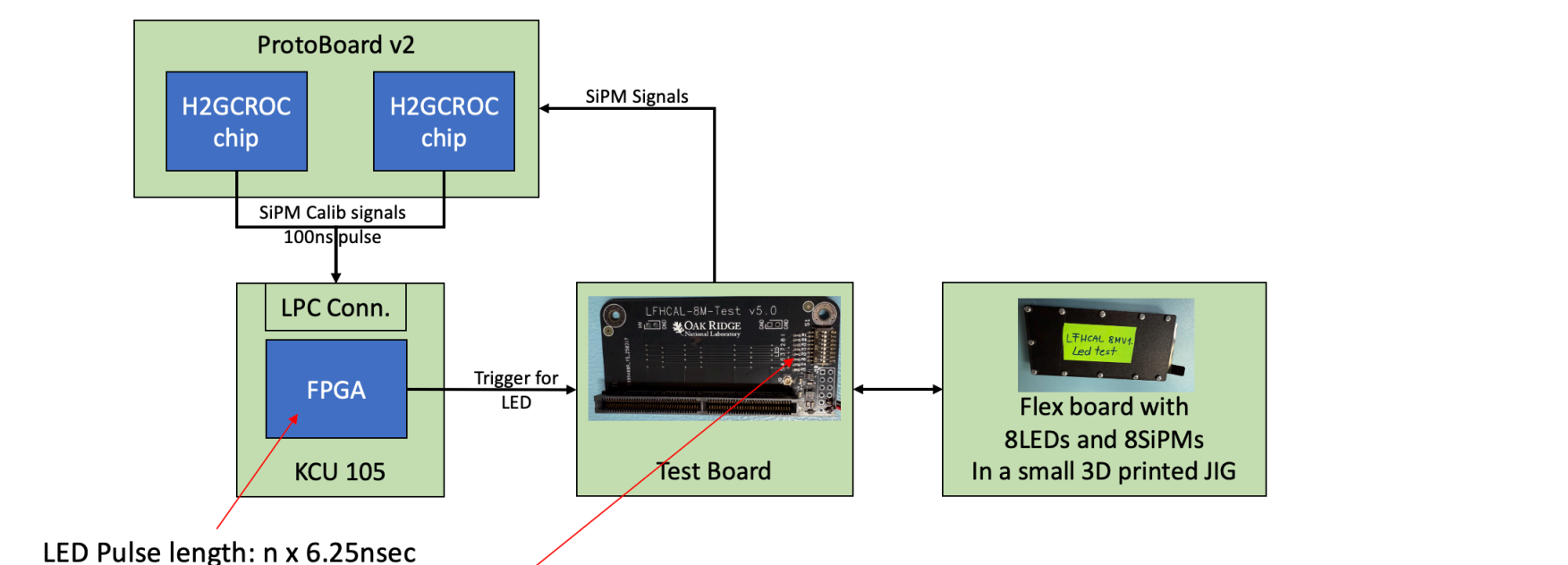
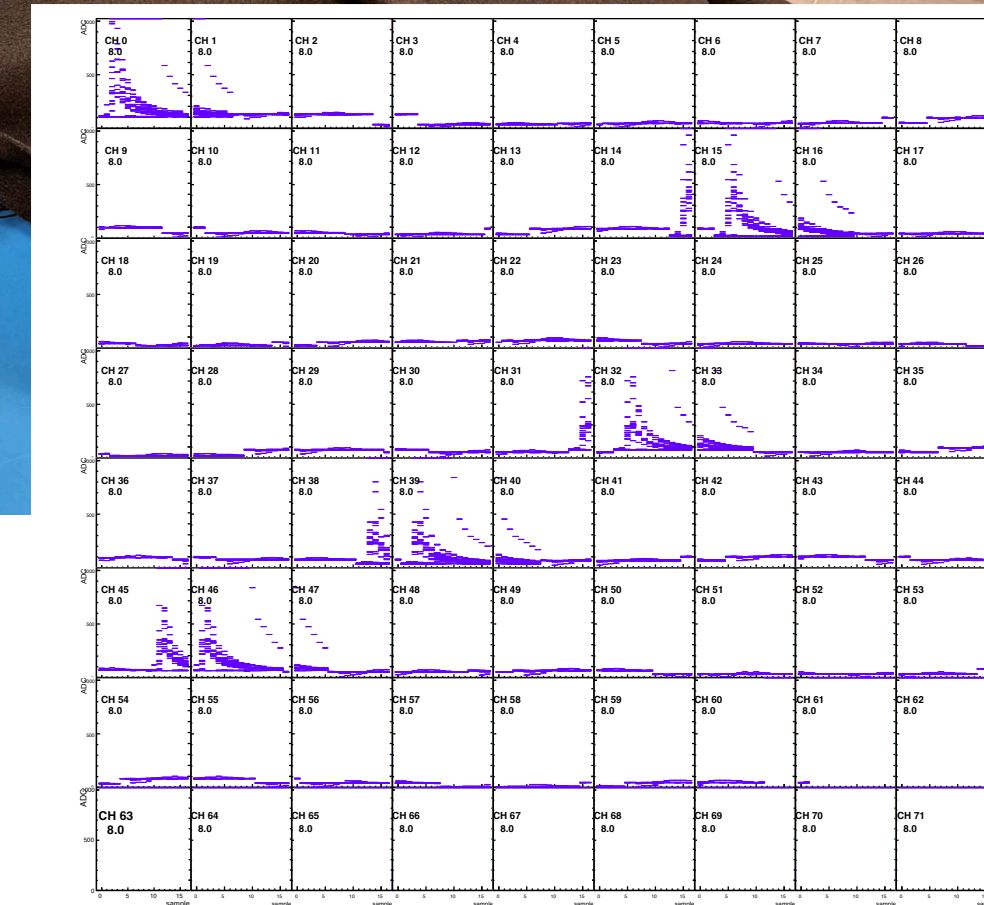
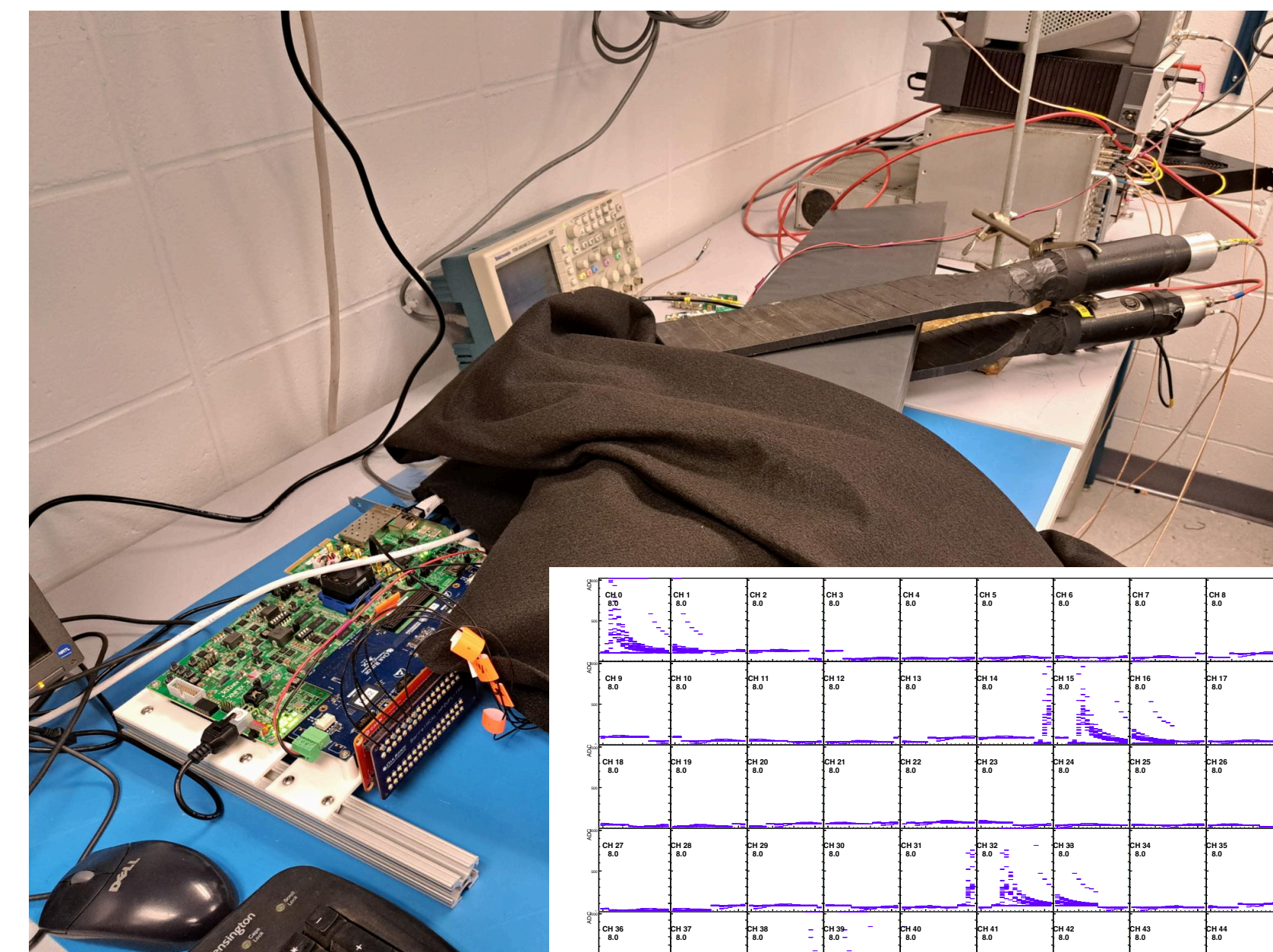
- How the signal changes as the function of the cable length from SiPM to HGCROC

2. Summing of the signal:

- Multiple SiPM signals summed together
 - Parallel connection
 - Passive summing
 - Active summing

3. LED Calibration from H2GCROC:

- This is the internal calibration pulse from the ASIC:
 - Synchronized with the ASIC clock
 - We now route it to the FPGA and use it as a trigger signal to drive the LED:
 - We change the length in ns for the LED signal
 - Other option to change the amplitude with reference voltage



LED Pulse length: $n \times 6.25\text{nsec}$

Serial resistor here
Before each LED

CalPulseExt: send STROBE pulse to the external pin SiPM calibration. The STROBE pulse length is $4 \text{ Bx } 40 \text{ MHz} = 100\text{ns}$. The STROBE pulse phase depends on the main digital clock from Fast Commands module (clk40_fc).

