W38_IB & W40_IF

pxdtest1: W38_IB

pxdtest8: W40_IF

Minimum Tests Required

- **DHPT HS Links**
  - short scan (to have a reference for later)
    - bias 200 to 250, step 5
    - bias_d 100 to 150, step 5
    - delay 0
- **Delays**
- **ADCs optimization using small parameter space**
- **Pedestal/noise (1k frames)**
- **2bit offset (delay and current source optimization)**
- **Pedestal/noise (1k frames)**
- **DCD analog common mode correction**
- **Pedestal/noise (1k frames)**
- **Source measurement different regions** (tbd. latest by Lab Framework meeting Tuesday June 11th)
  - Threshold 5
  - Verify shape of the spectra
  - SNR in different regions
  - Adjust VNSubIn
- **Gated mode: simplified test using manual switch for the VETO and standard DHH firmware** (metho

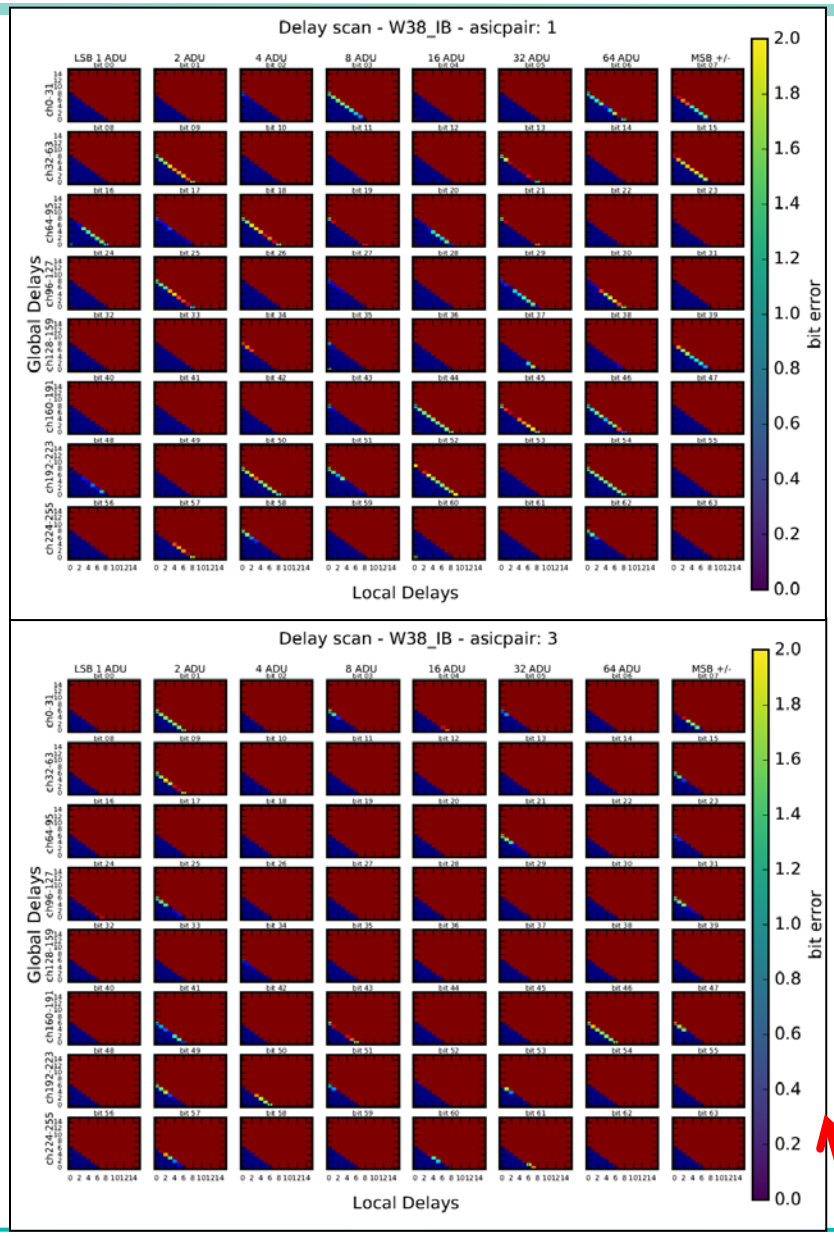
Commands (not compliant to the coding guidelines):

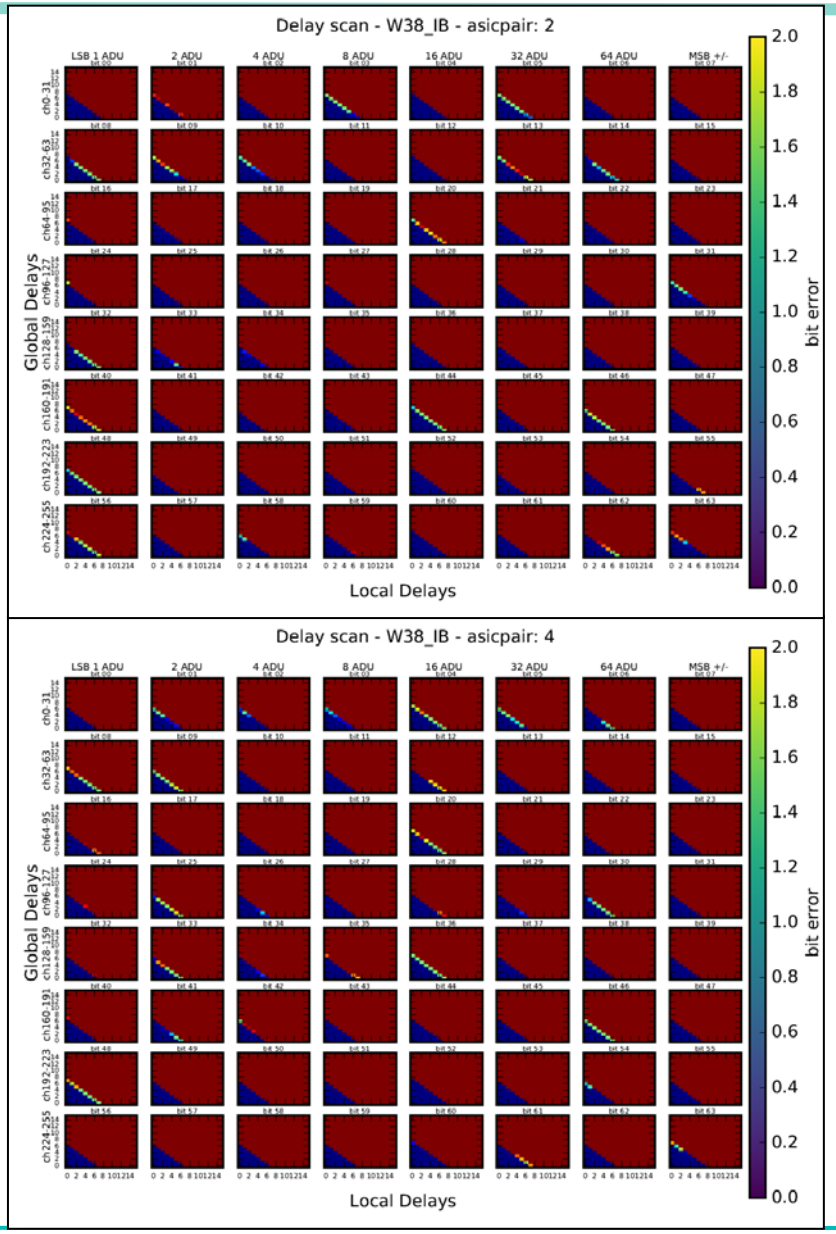
Pedestals using the MEMDUMP command:

I did not participate the measurements; rare entries in the elog

https://confluence.desy.de/display/BI/Phase+2+PXD9+Module+Testing

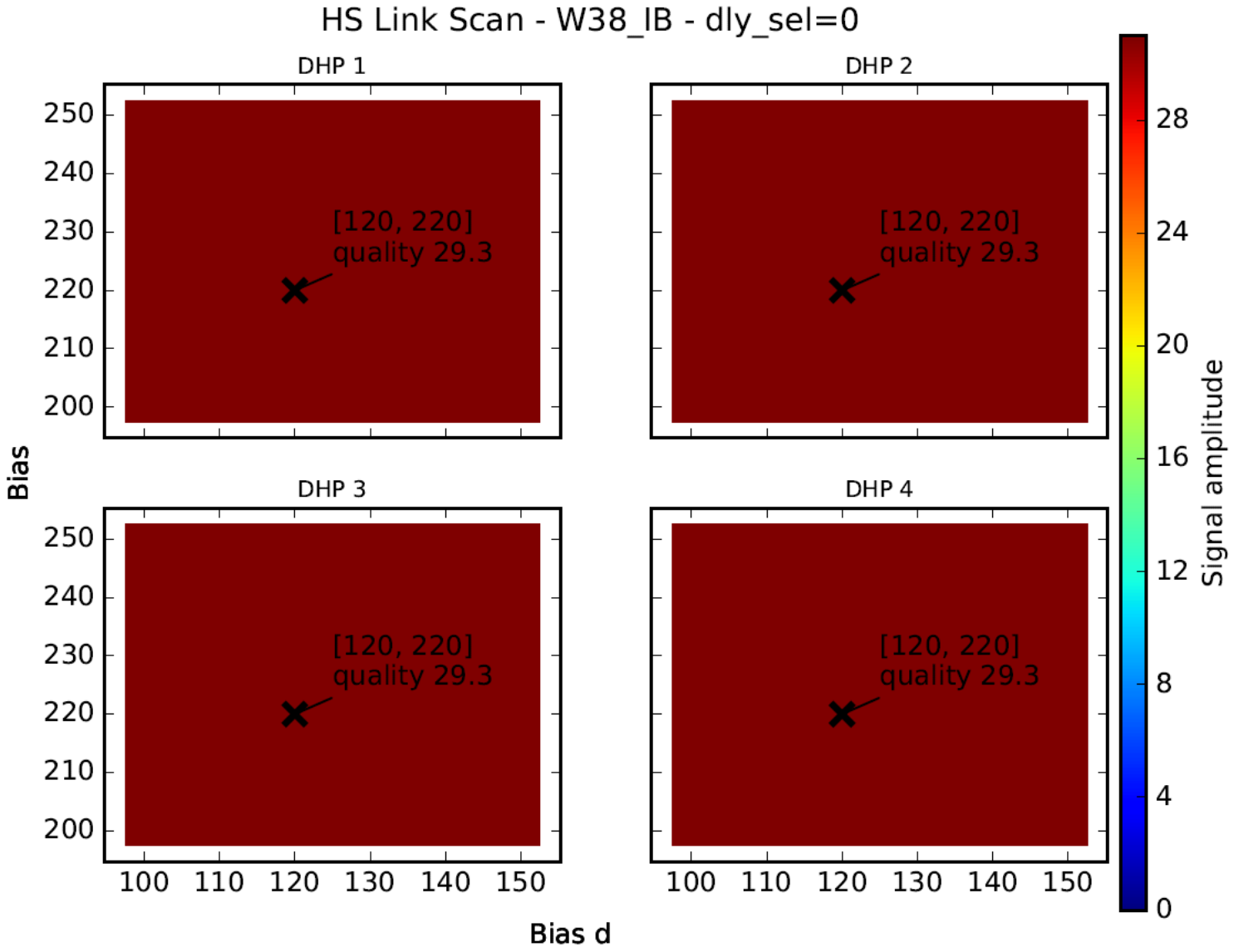
W38_IB - Delays



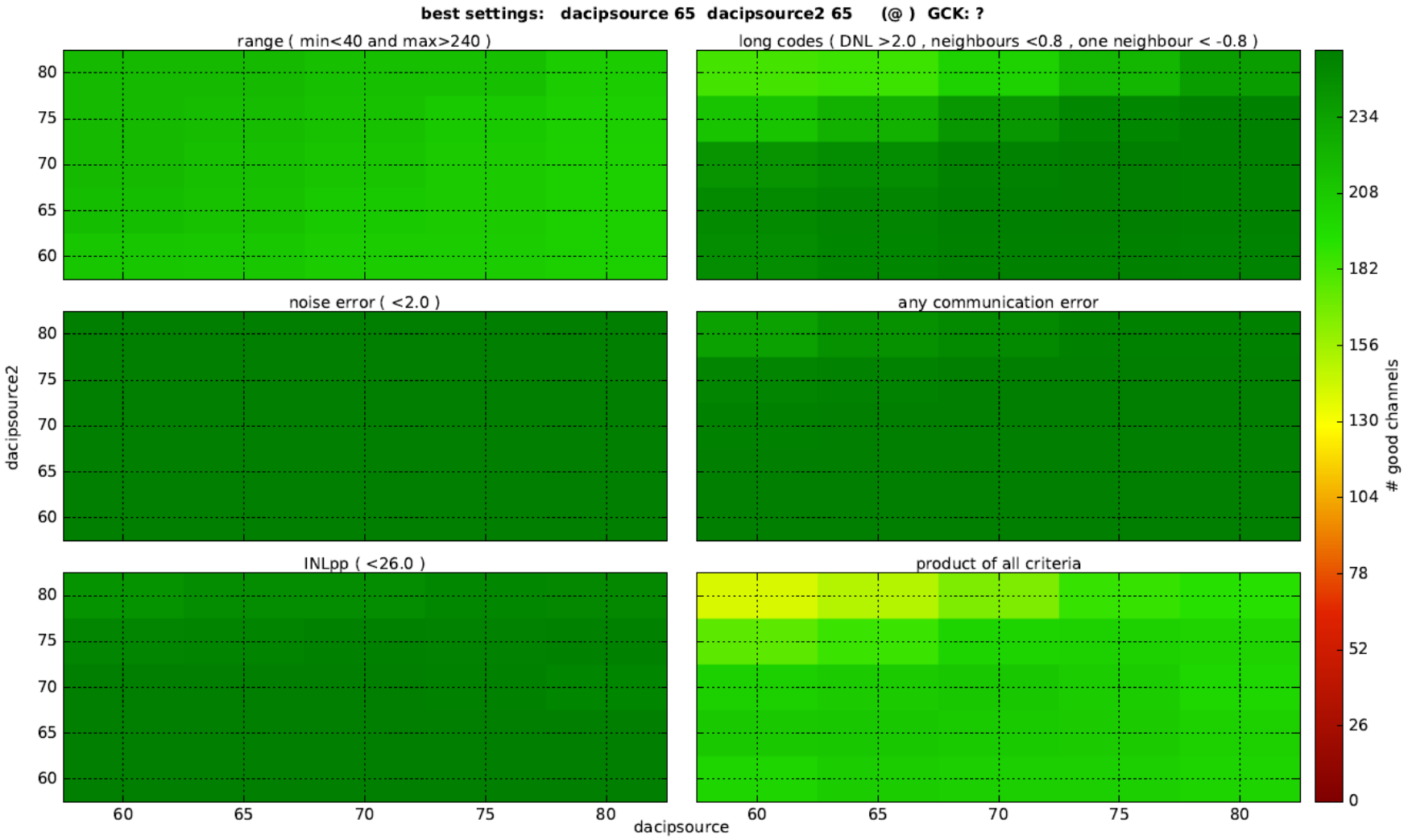


A strange colorbar

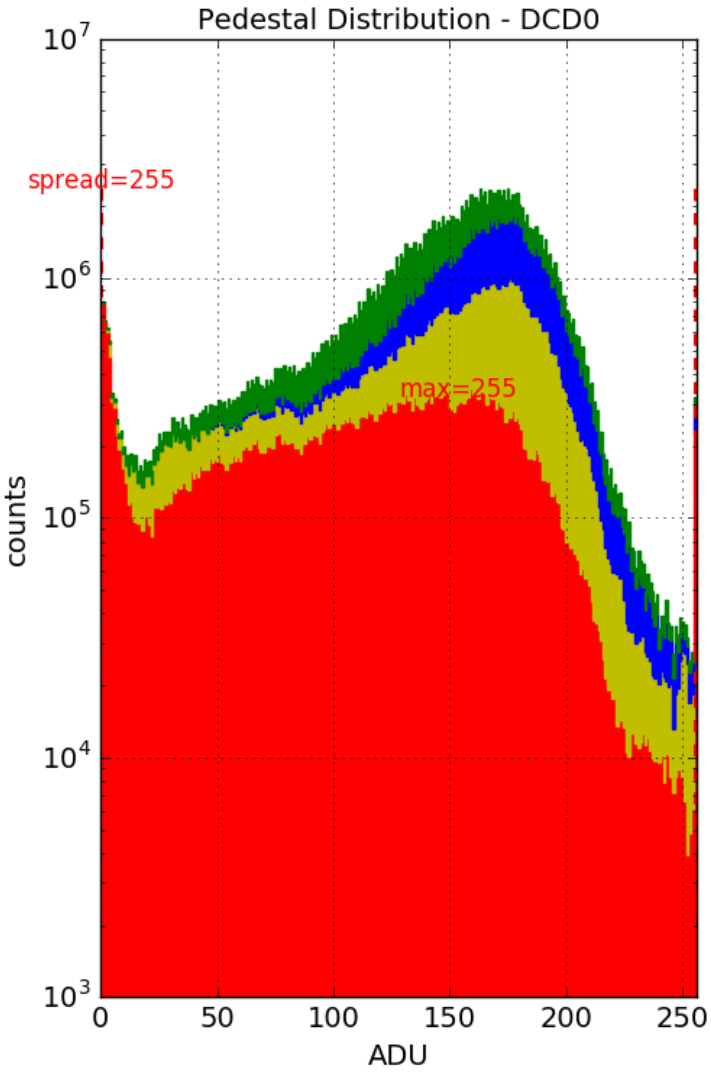
W38_IB – HS Link Scan

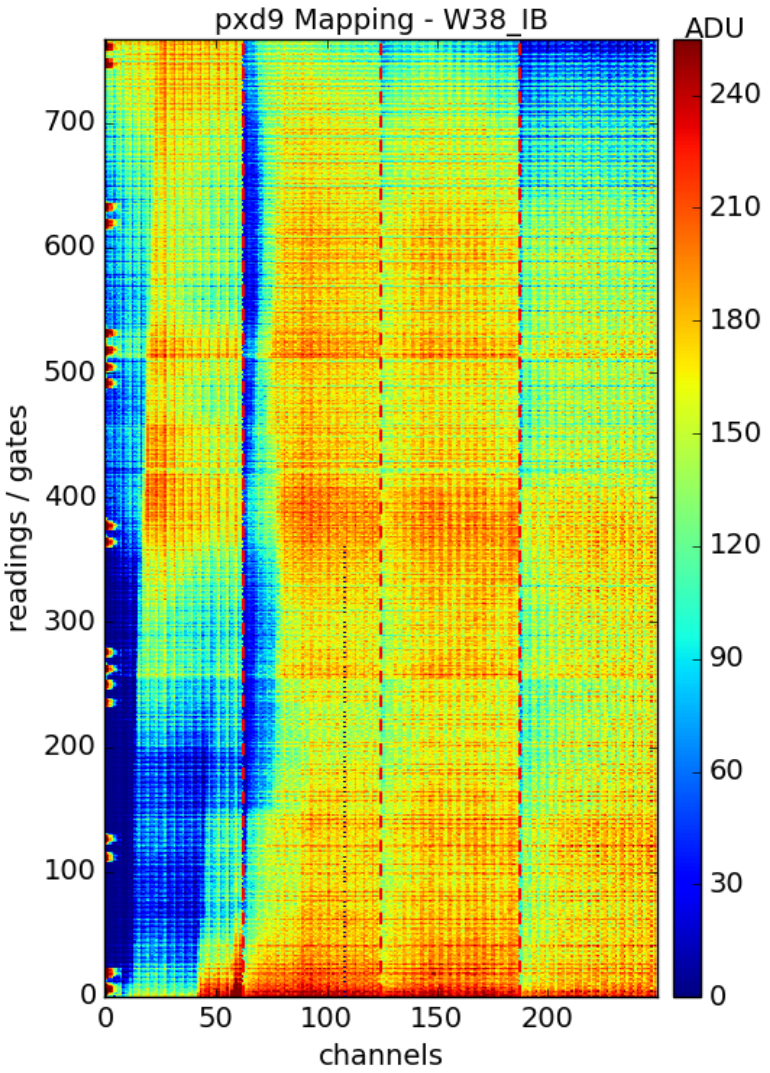


W38_IB - ADC Curves – ipsource/ipsource2 with gate

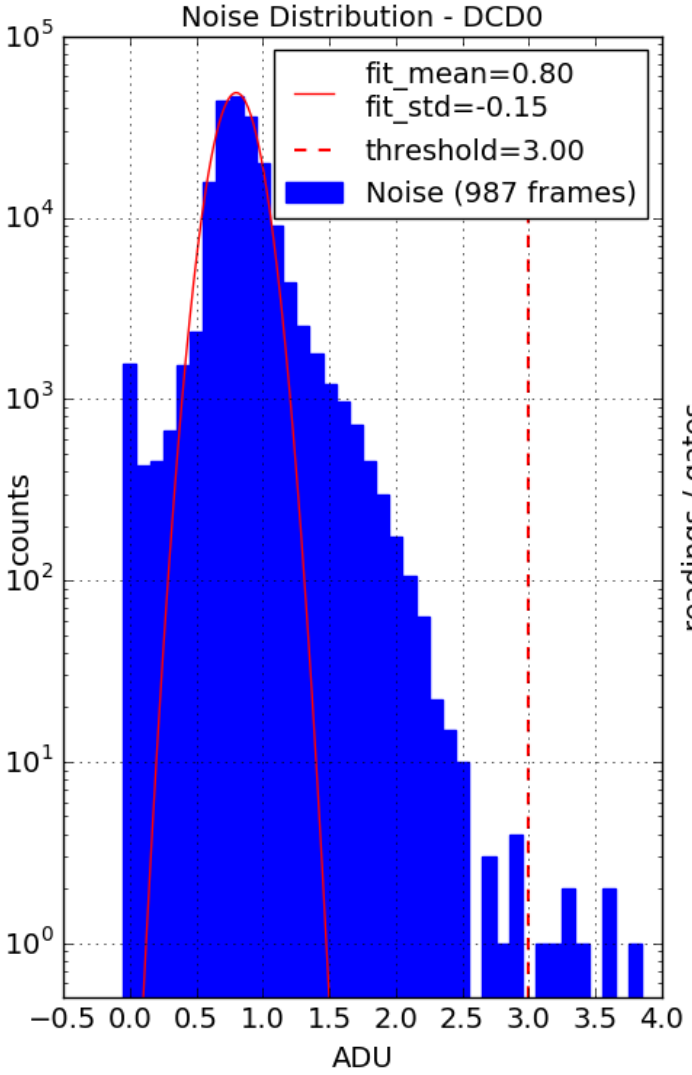


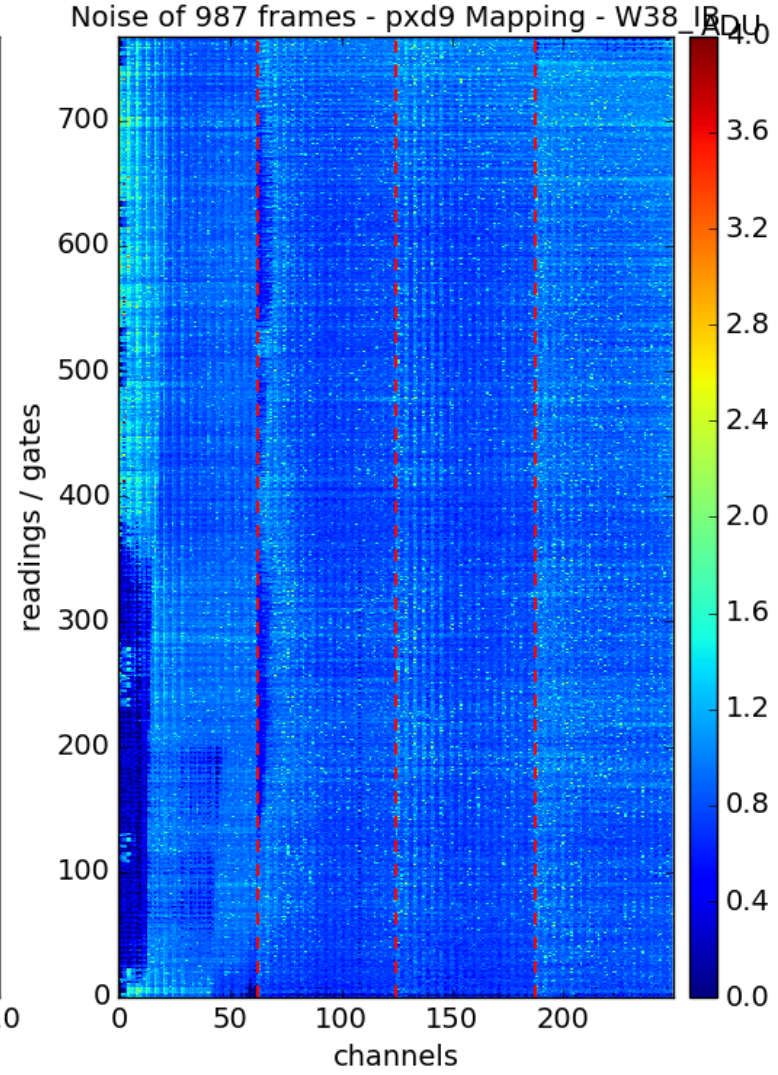
W38_IB – Pedestals





W38_IB – Noise


Noise Distribution - DCD0
fit_mean=0.80
fit_std=-0.15
threshold=3.00
Noise (987 frames)
counts
ADU


Noise of 987 frames - pxd9 Mapping - W38_IB
ADU
readings / gates
channels

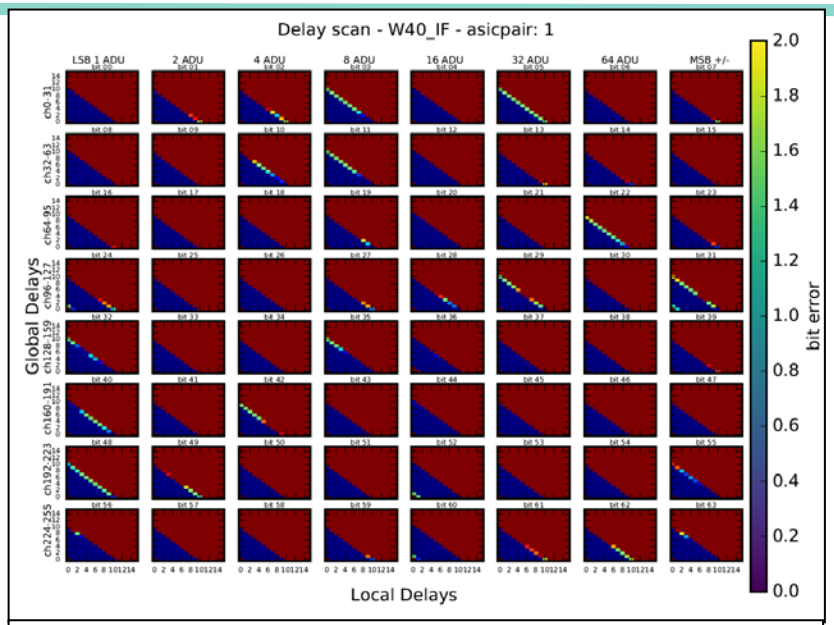
W38_IB to do

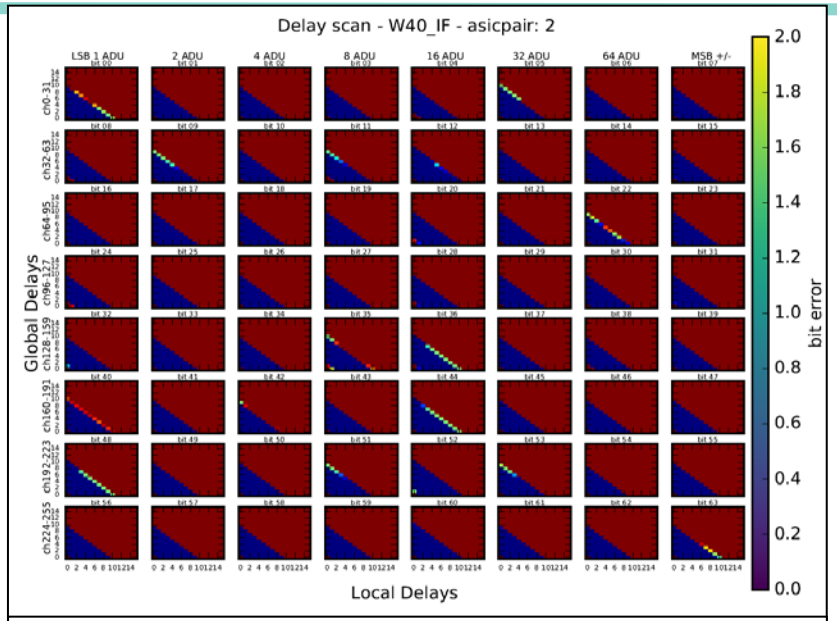
Offsets (seems feasible)

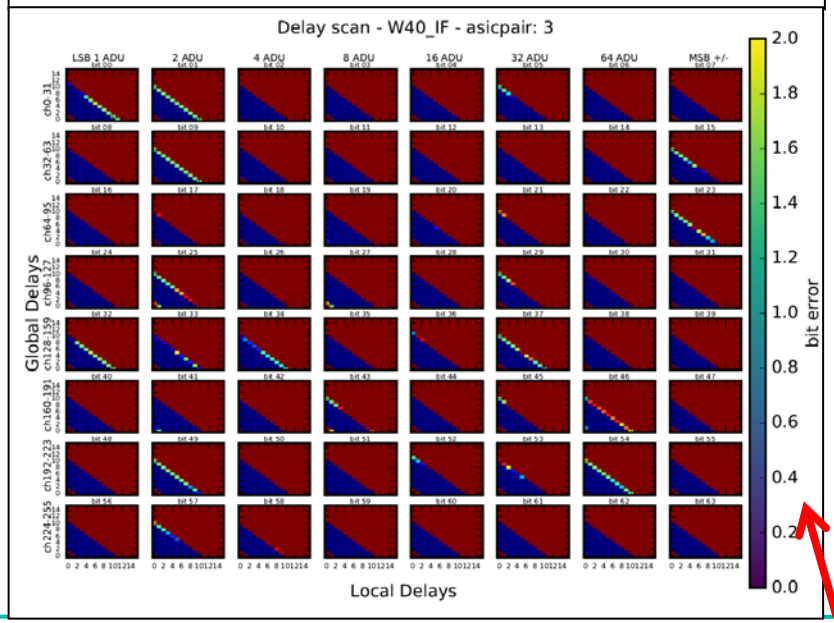
ACMC (seems feasible)

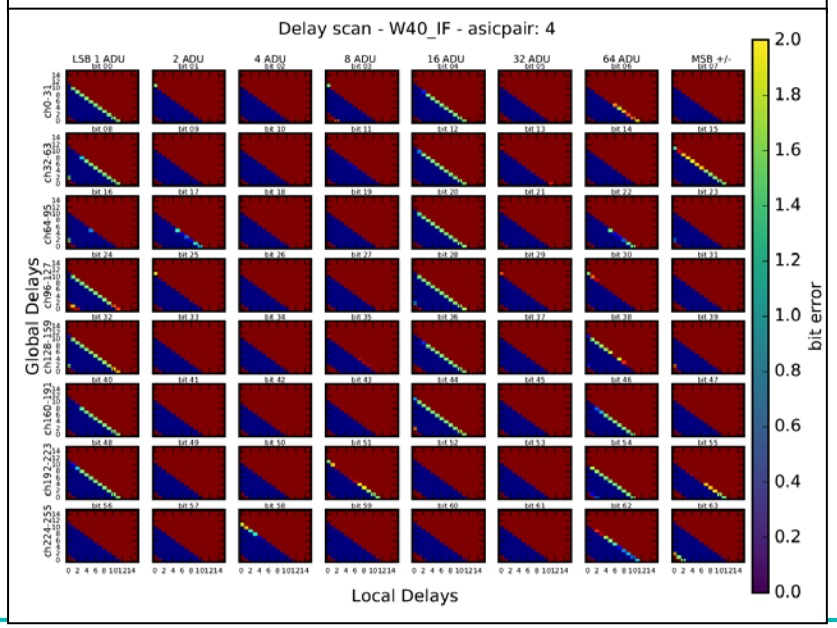
Source (seems rather not feasible within 1 day)

W40_IF - Delays



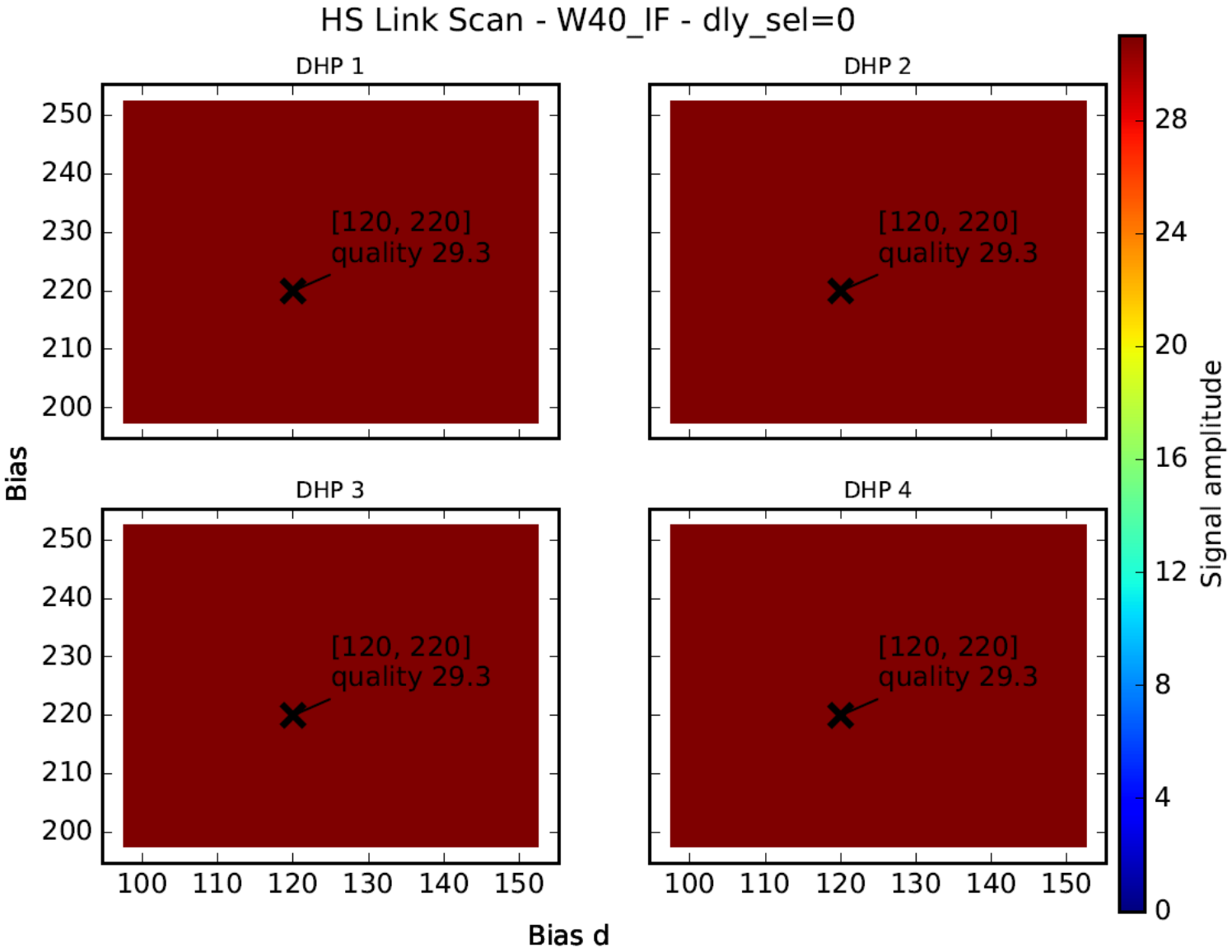






A strange colorbar

W40_IF – HS Link Scan

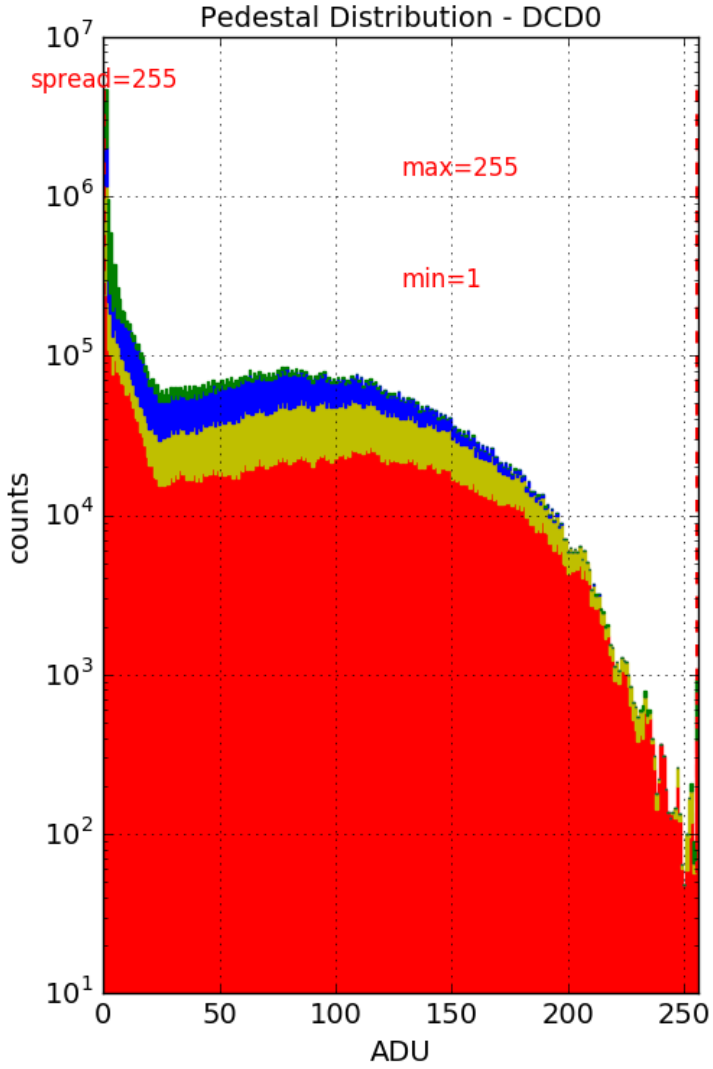


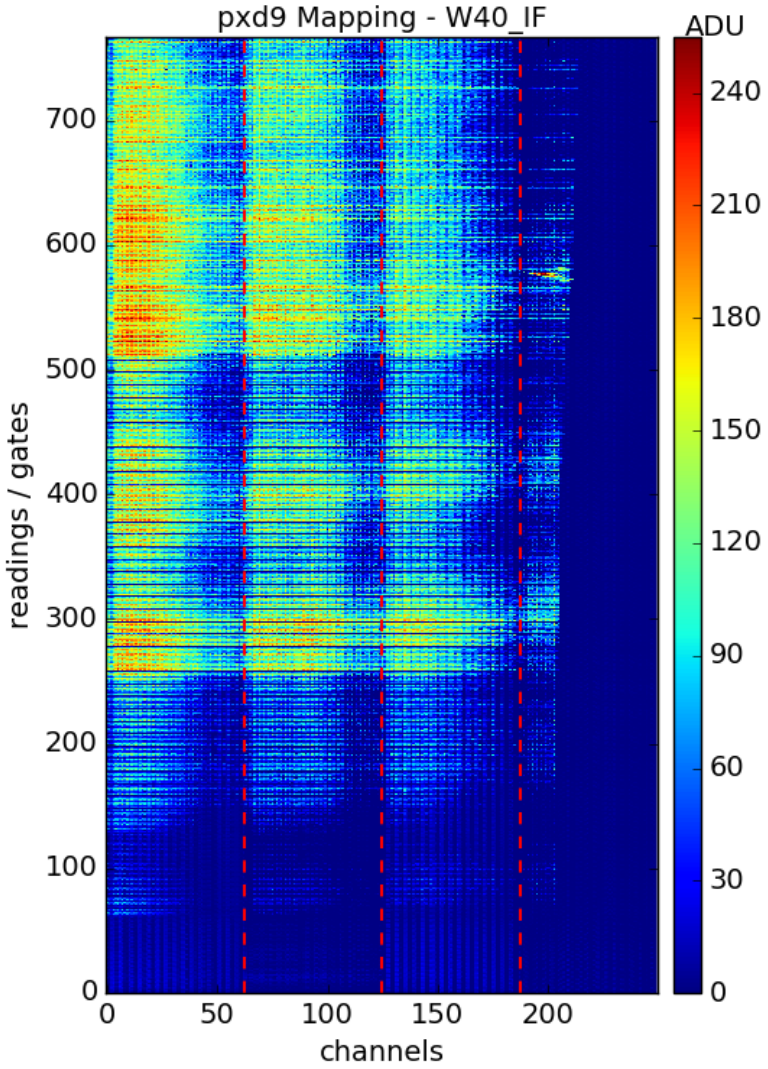
W40_IF - ADC Curves

Recorded data ipsource/ipsource2 with DHE current source – no analysis yet

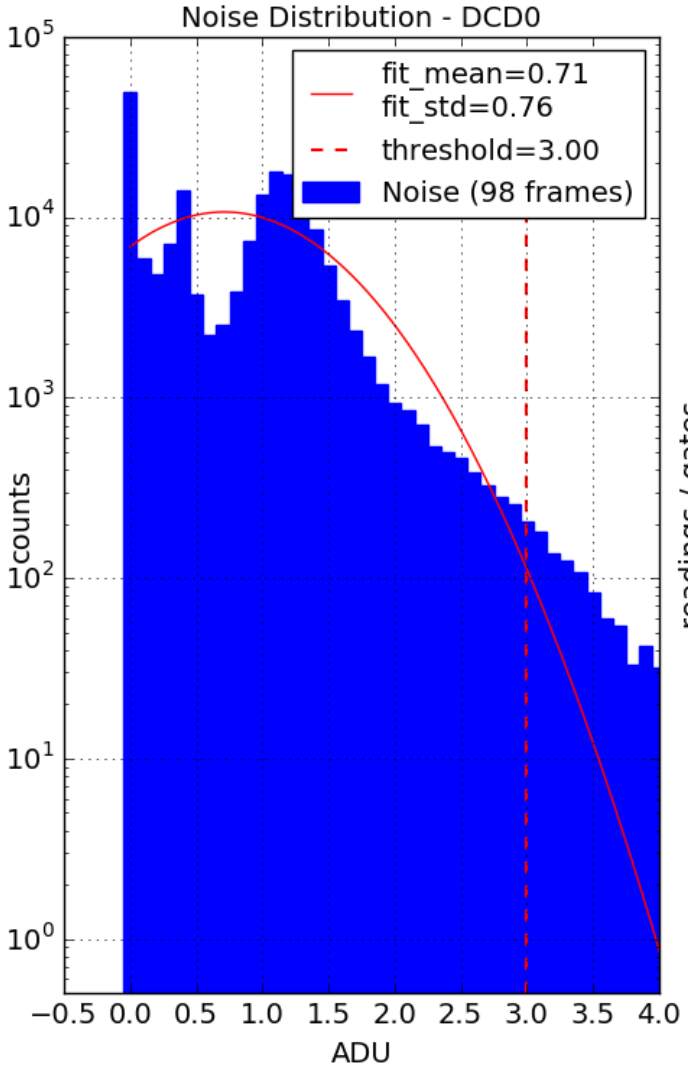
Recorded data ipsource/ipsource2 with DEPFETs as current source – no analysis yet

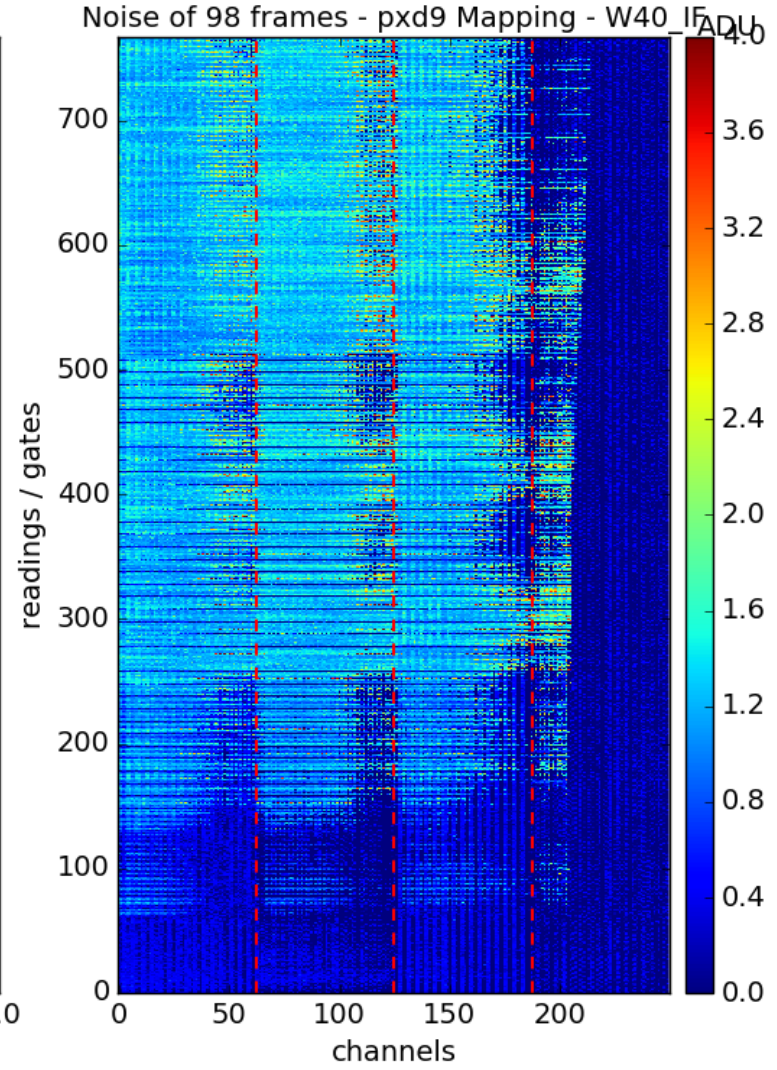
W40_IF – Pedestals – ACMC off – no offsets



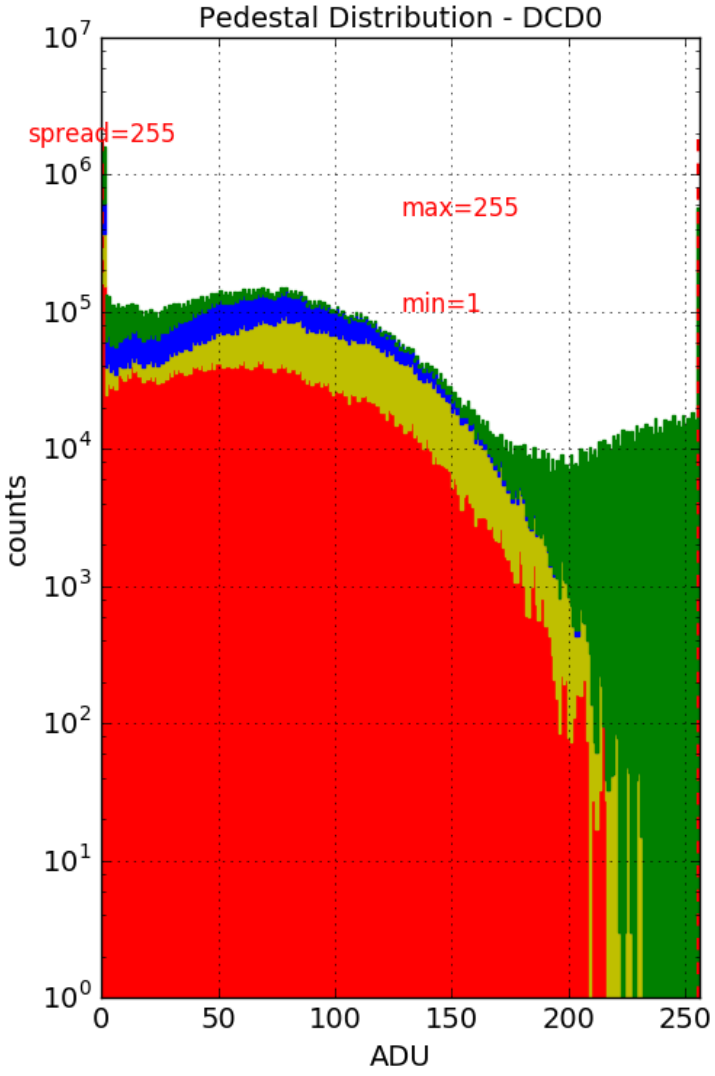


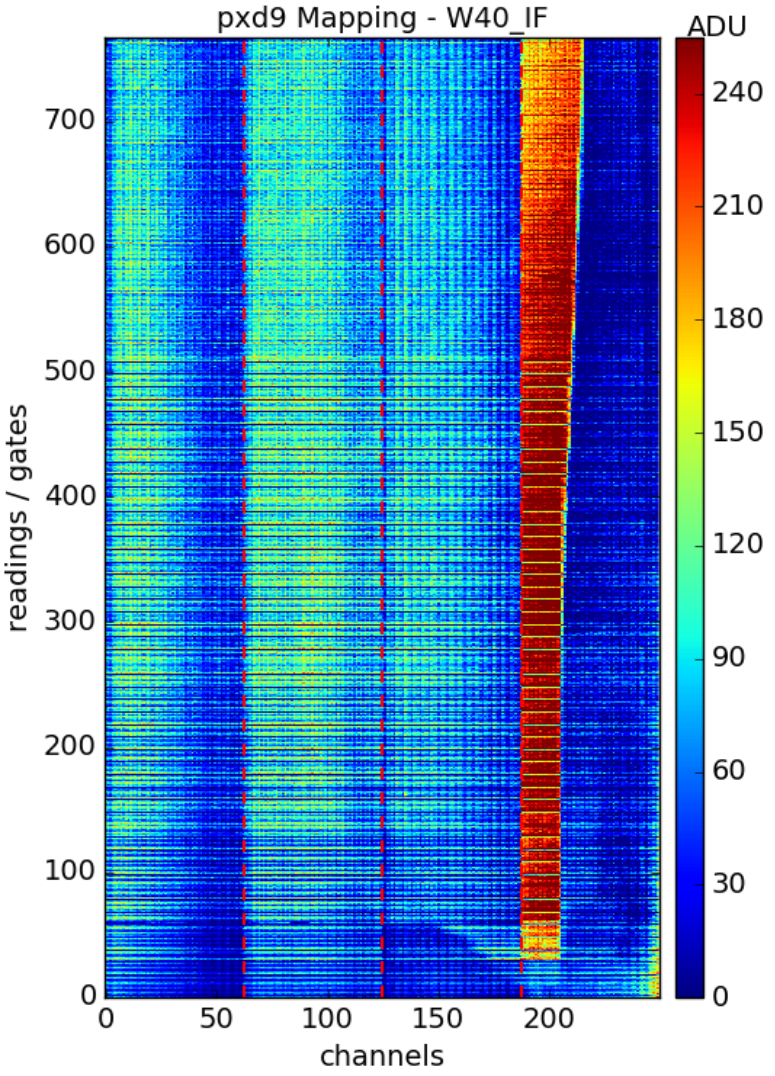
W40_IF – Noise– ACMC off – no offsets



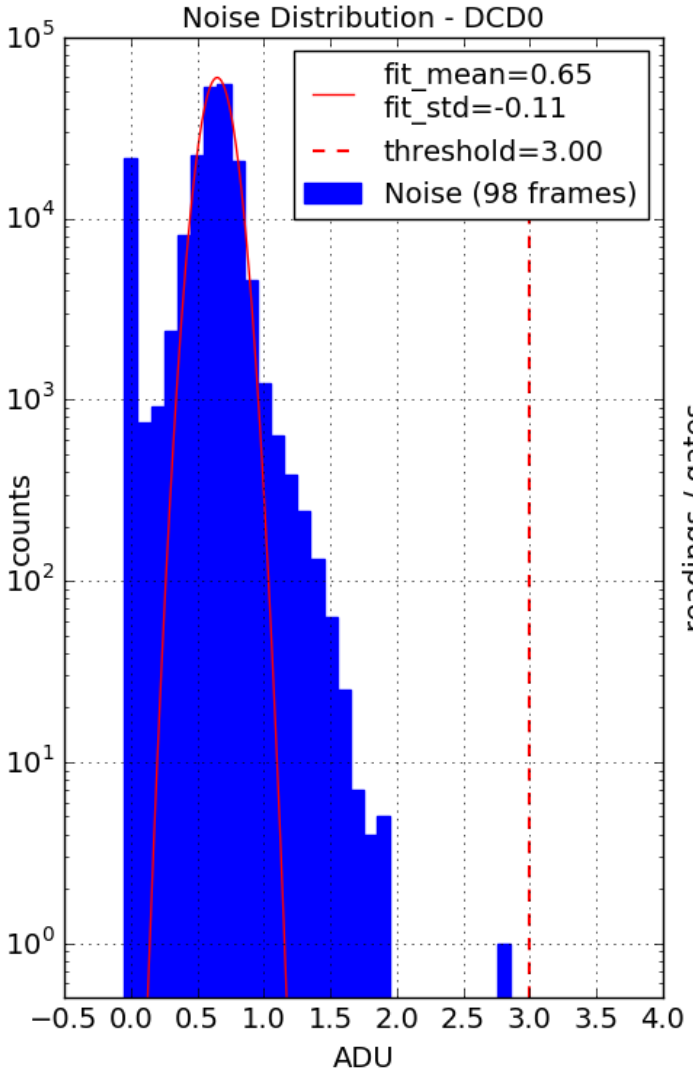


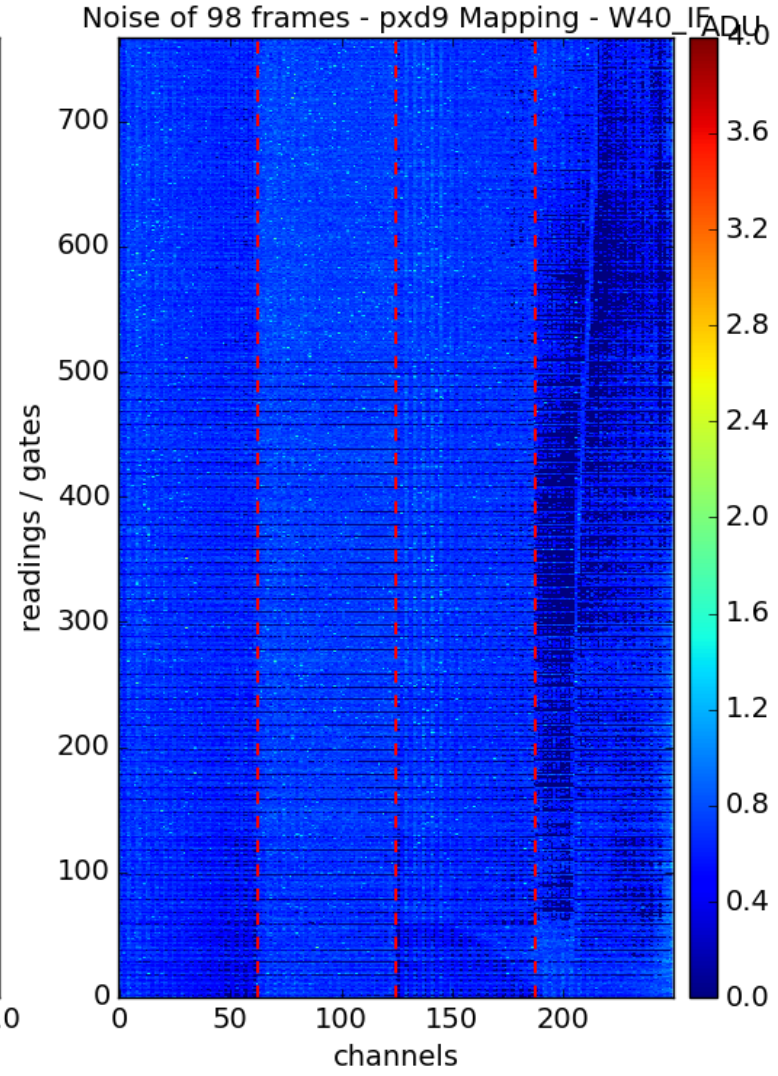
W40_IF – Pedestals – ACMC on – no offsets





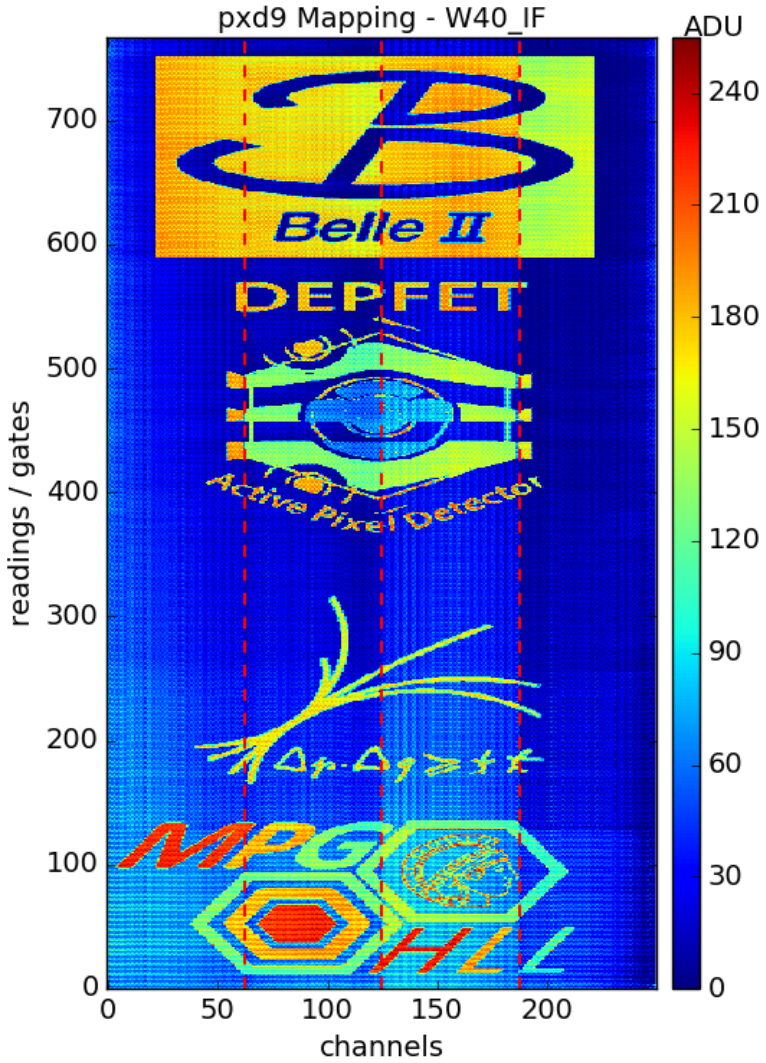
W40_IF – Noise– ACMC on – no offsets

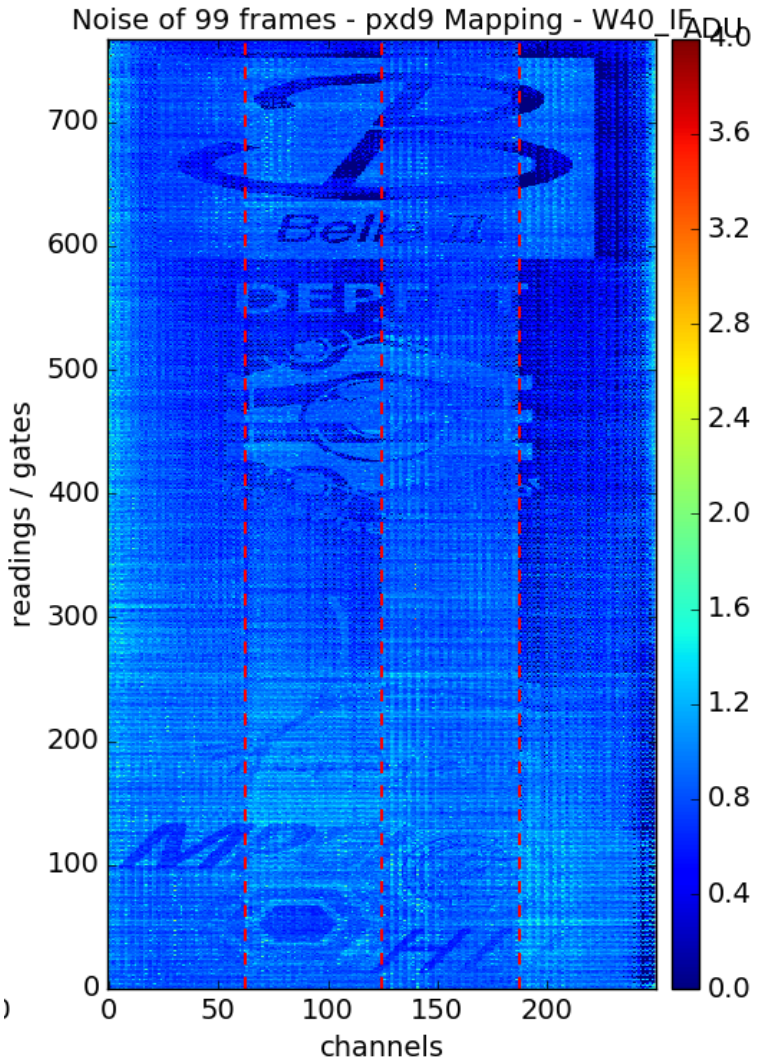




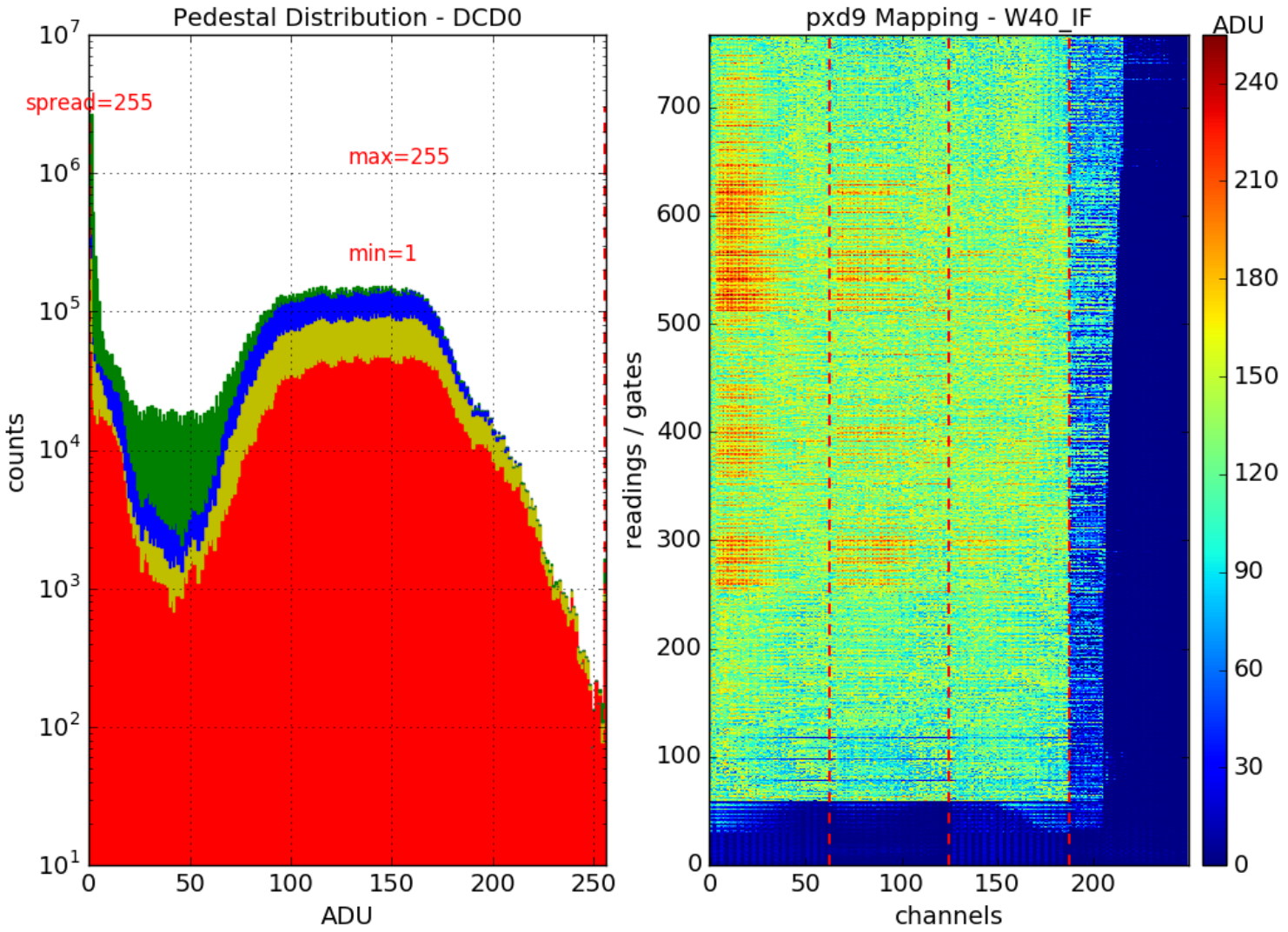
W40_IF – Offsets - Delays

Switch off matrix, write pre-defined complex test-pattern into DHPs

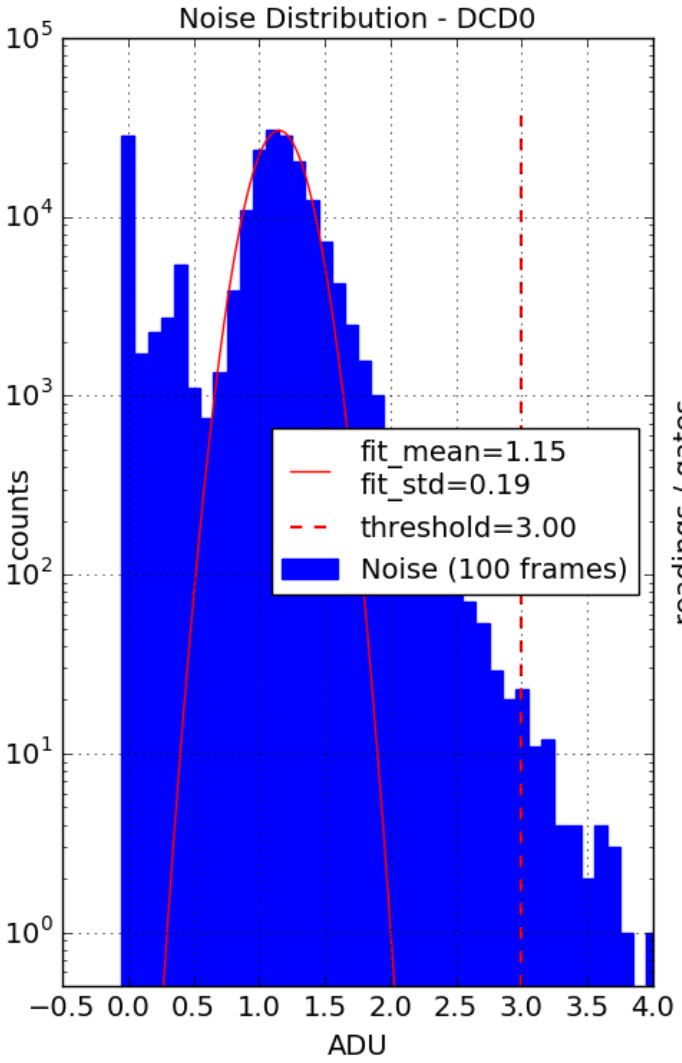


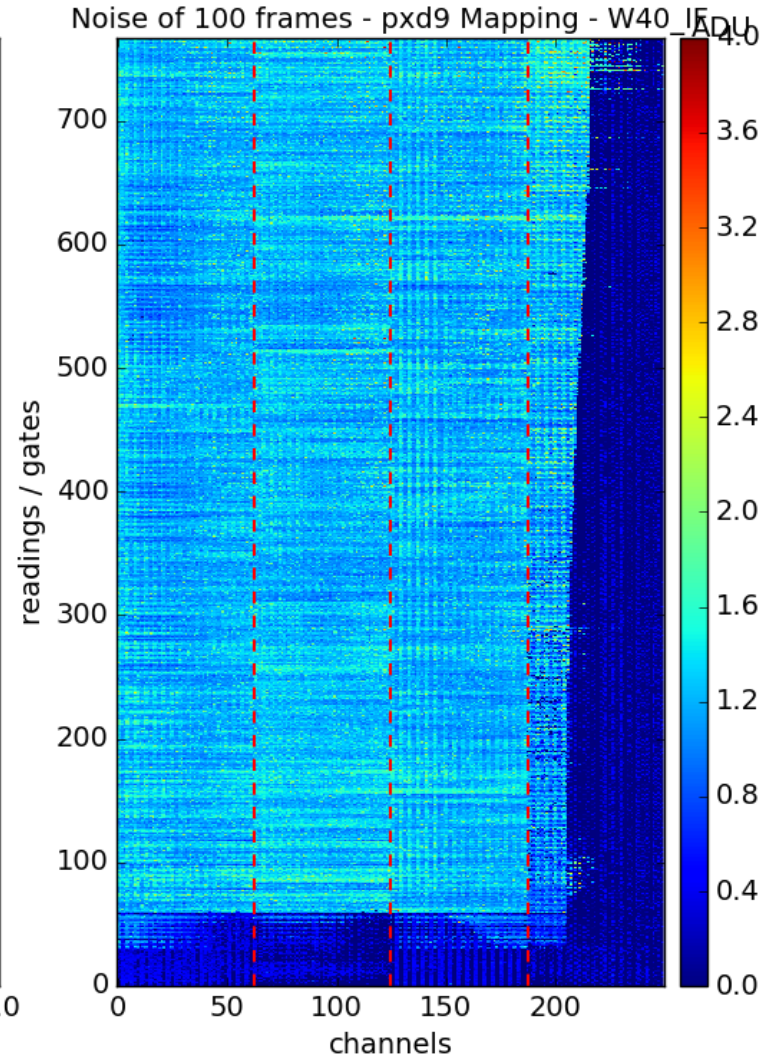


W40_IF – Pedestals – ACMC off - Offsets on

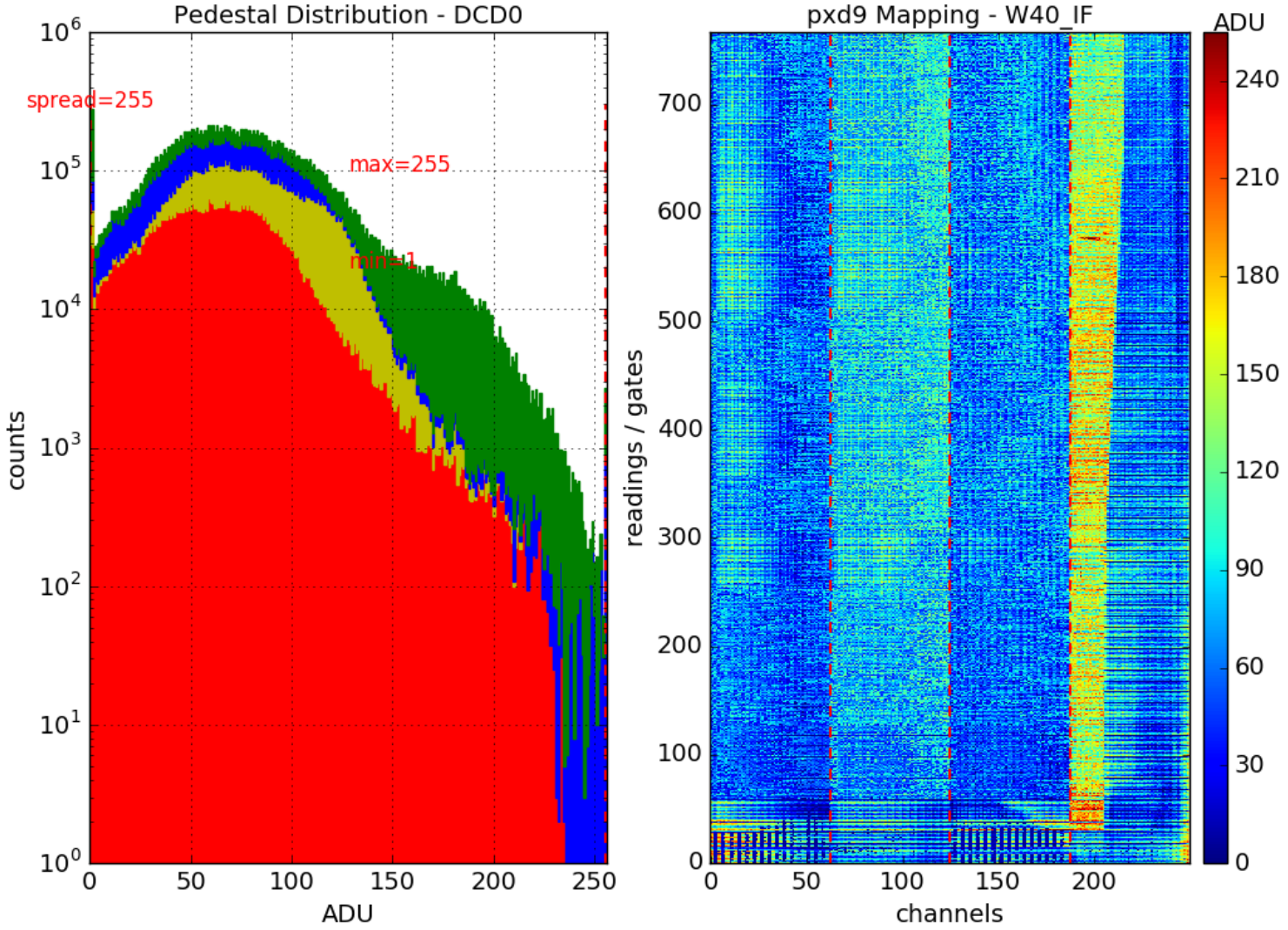


W40_IF – Noise – ACMC off - Offsets on

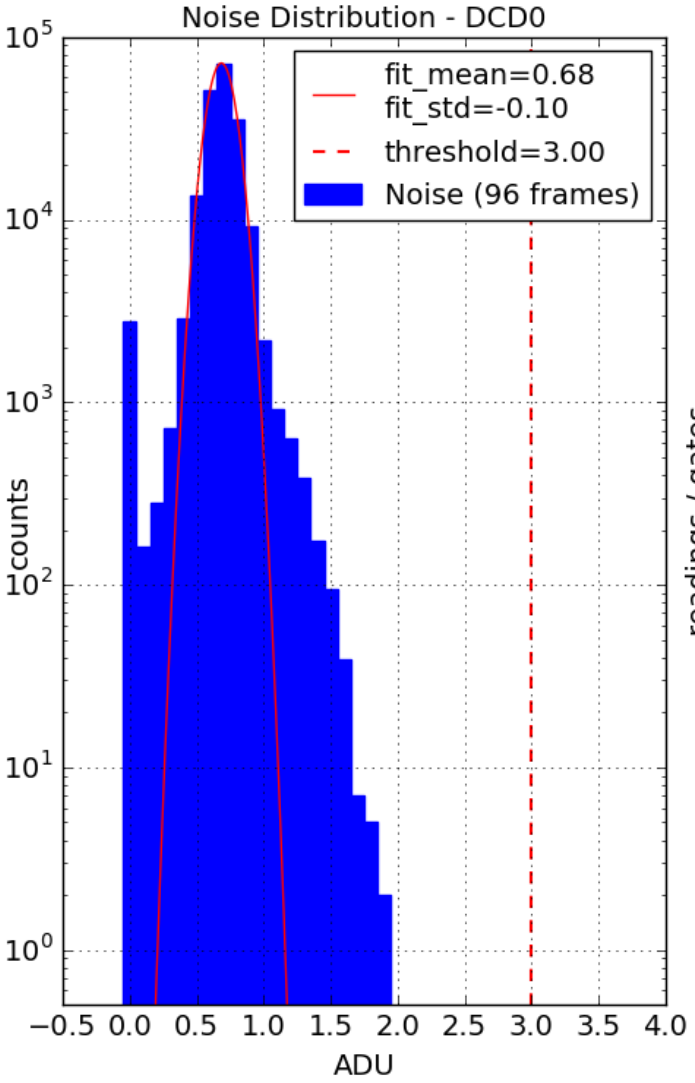


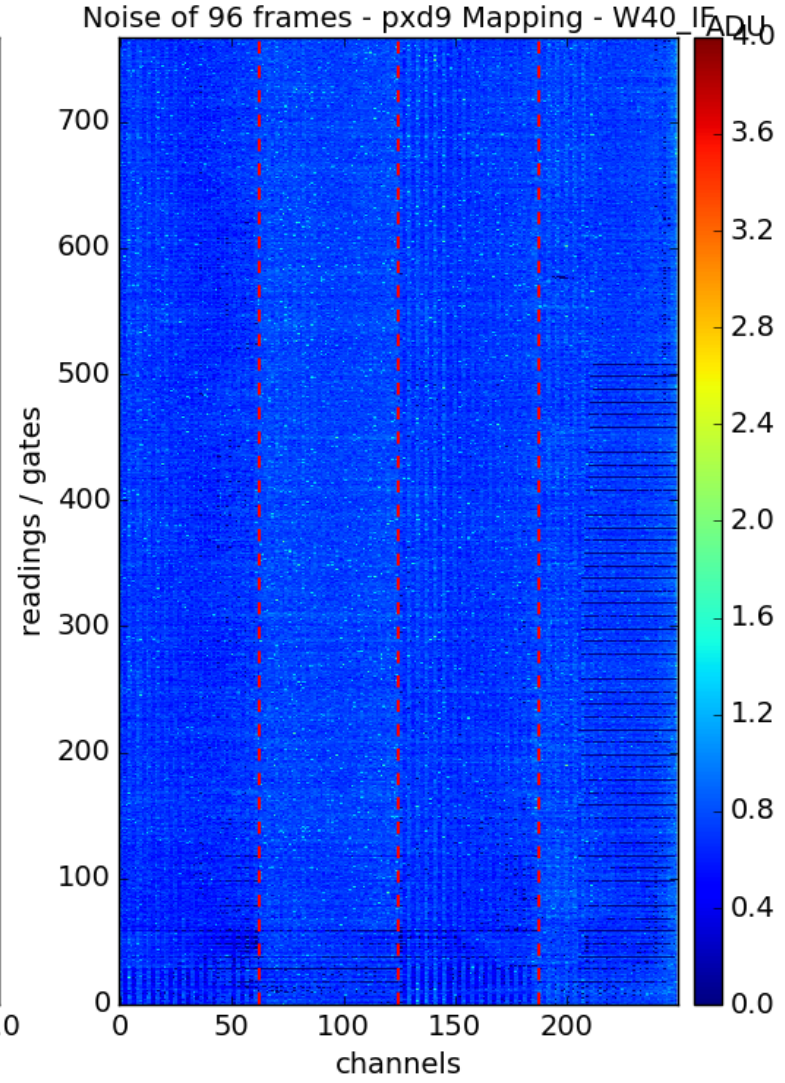


W40_IF – Pedestals – ACMC on - Offsets on

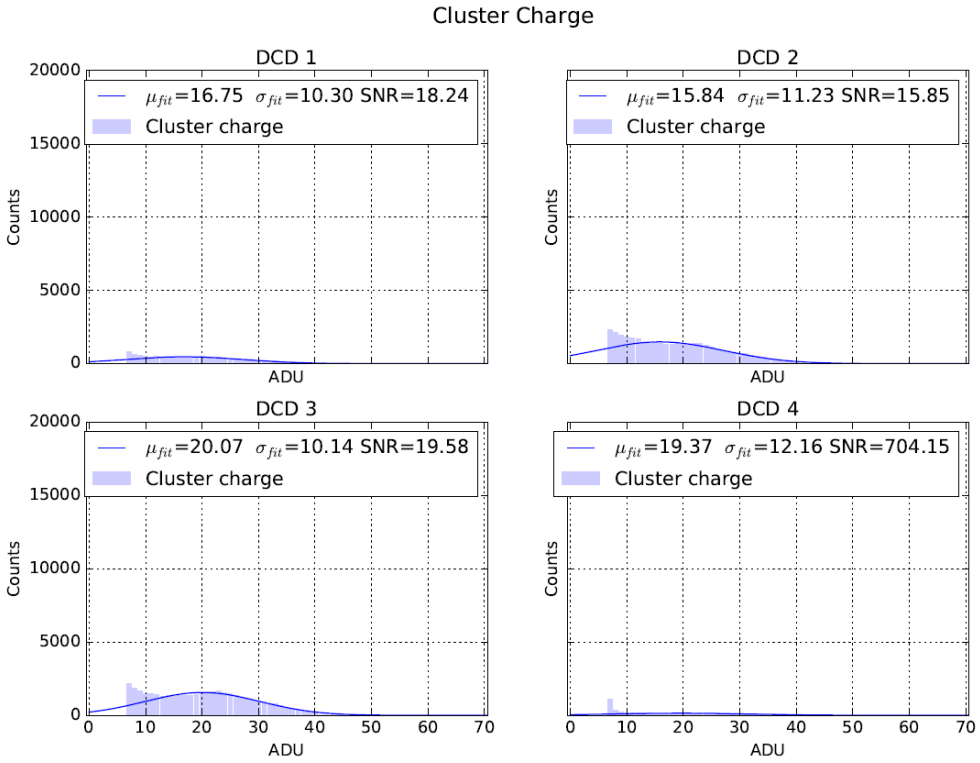


W40_IF – Noise – ACMC off - Offsets on

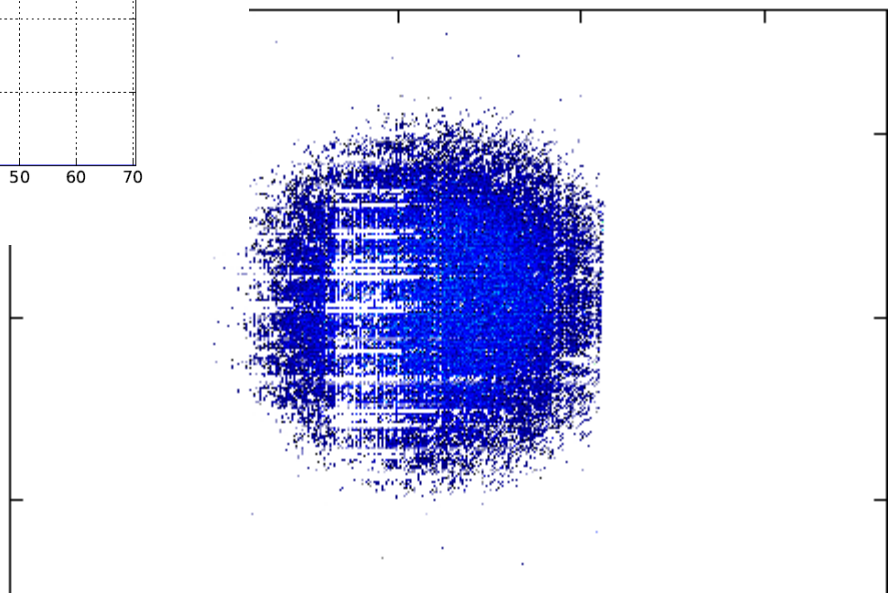




W40_IF – Source ????



Definitely needs to be repeated



W40_IF to do

Source (seems rather not feasible within 1 day)