



In2p3

LIR

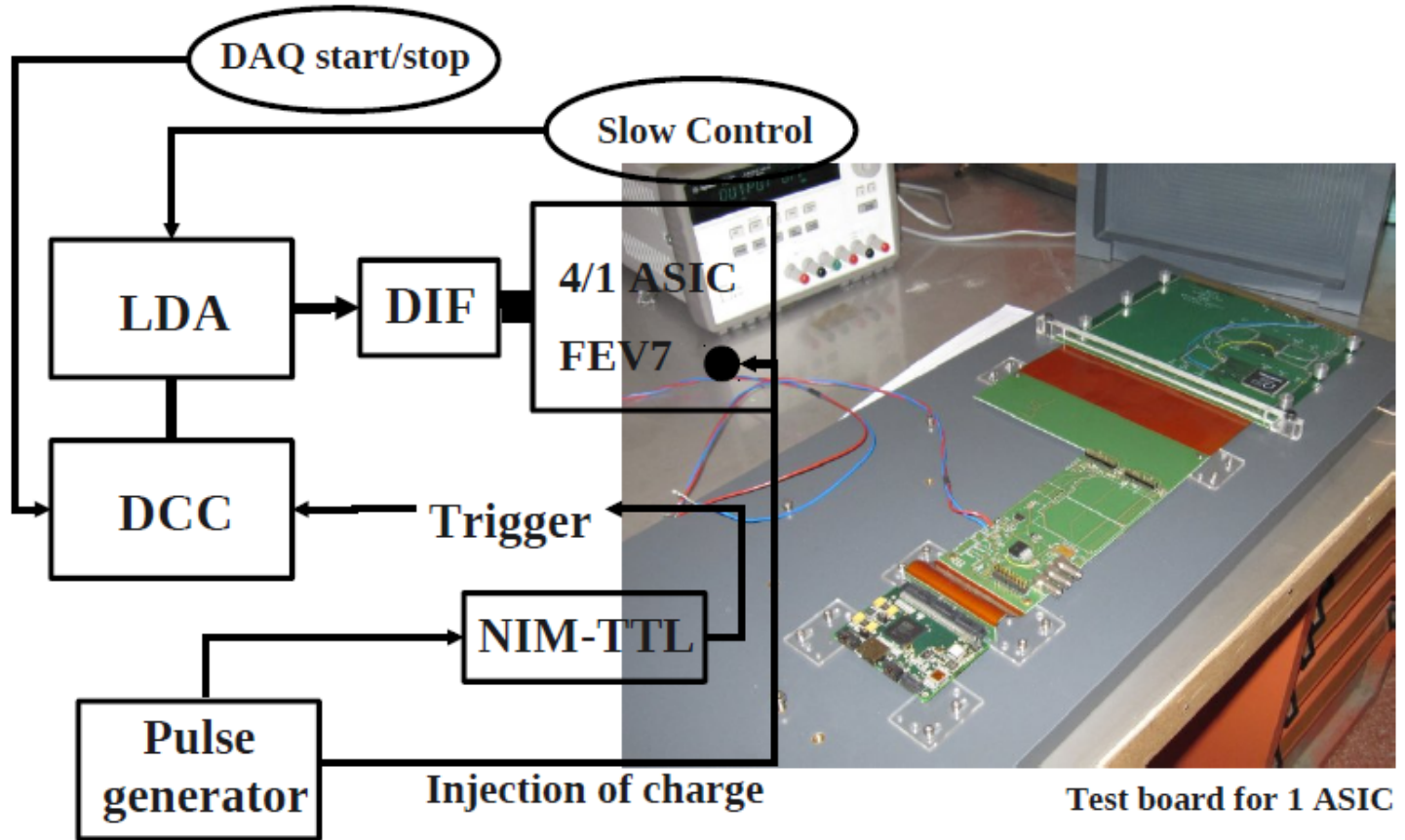
Attempts to operate Spiroc2 in skiroc mode for Si-W ECAL

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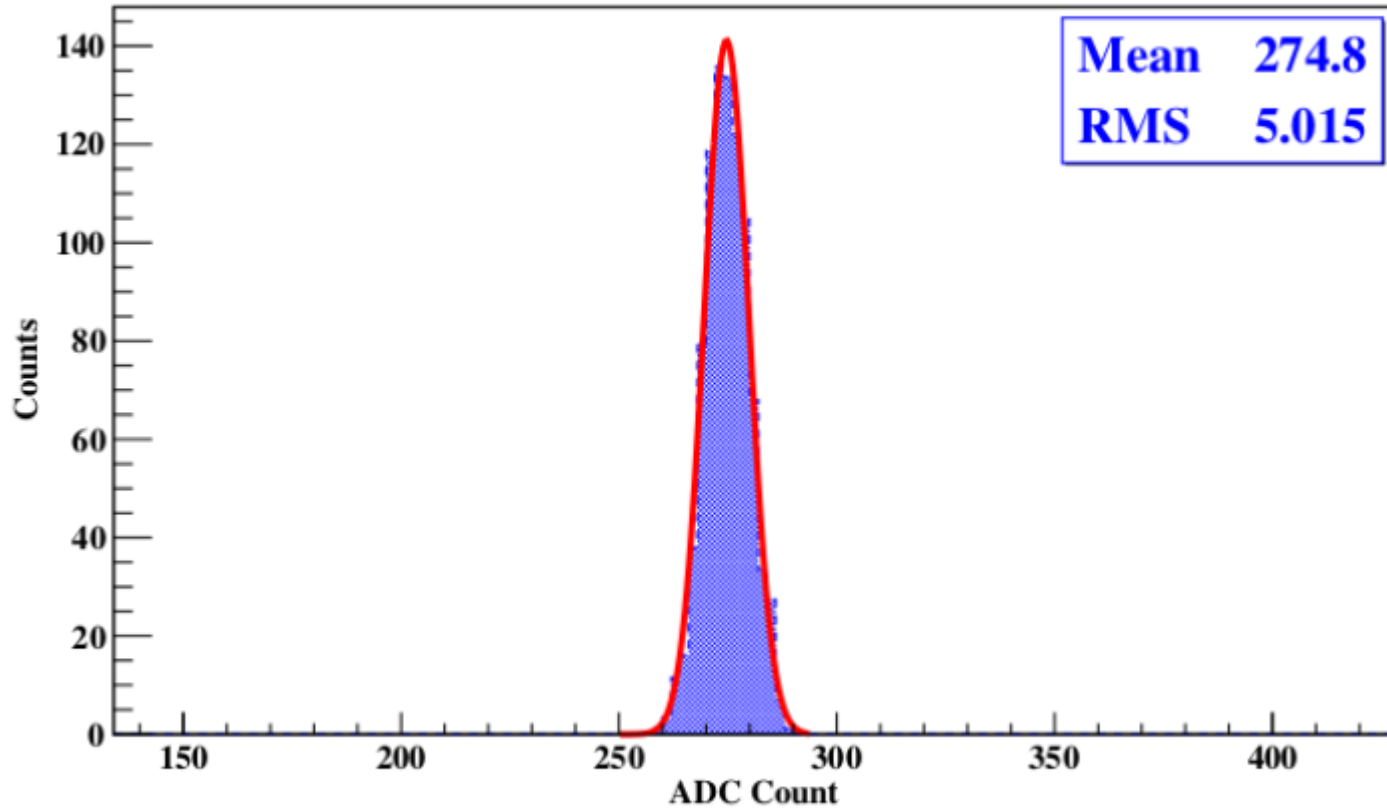
Test setup with injected charge



After several months

- Preamplifiers seem not work in skiroc mode
 - Need to inject small current to get proper bias
 - Need specific settings of the input DAQ
 - Still not work properly
- => injection of signal at a high amplitude
- (same done with spiroc2a but unable to configure due to some pinout incompatibility)
 - Should be solved now

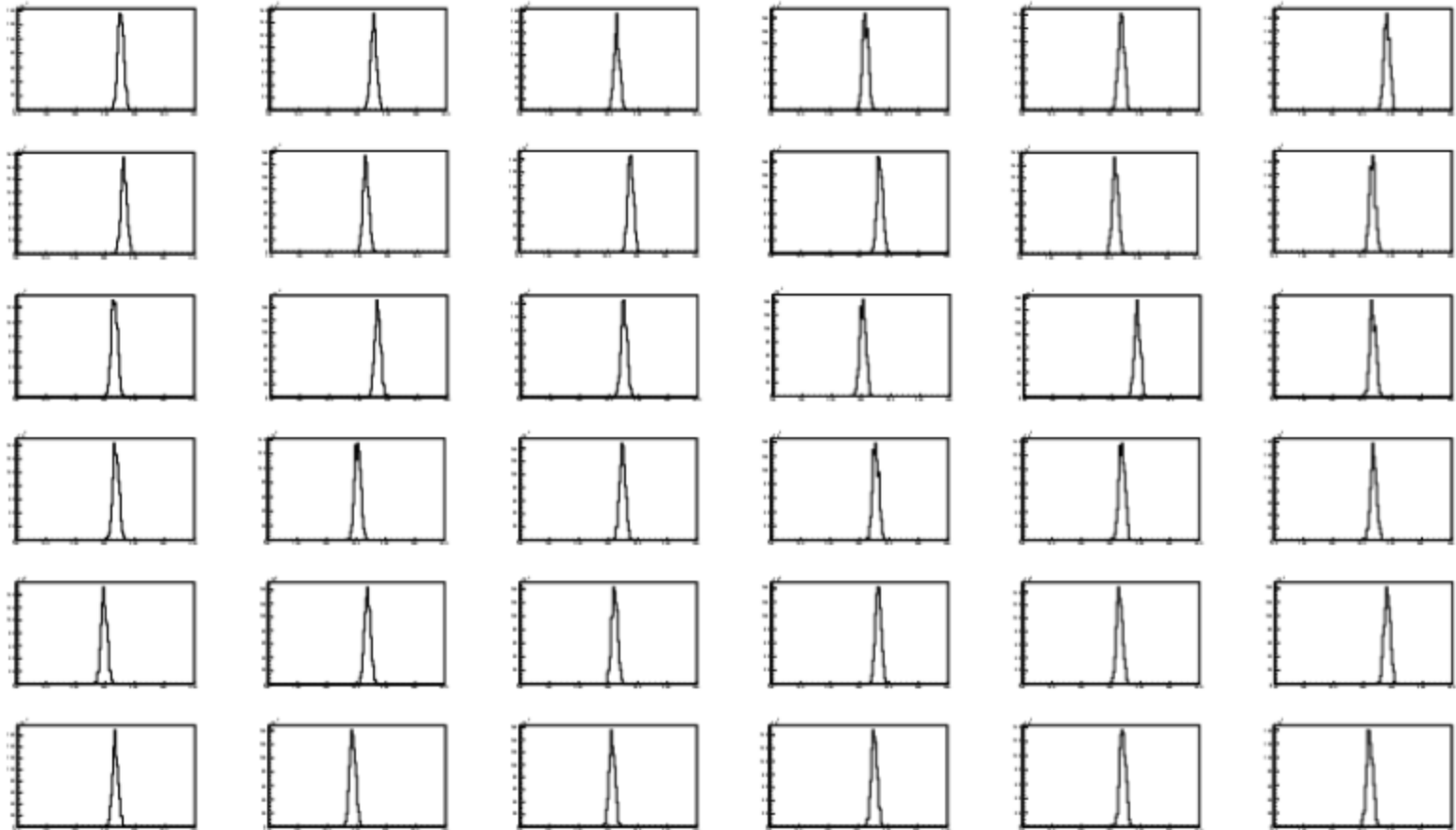
Pedestal study:



Pedestal (noise) value for one channel and asic

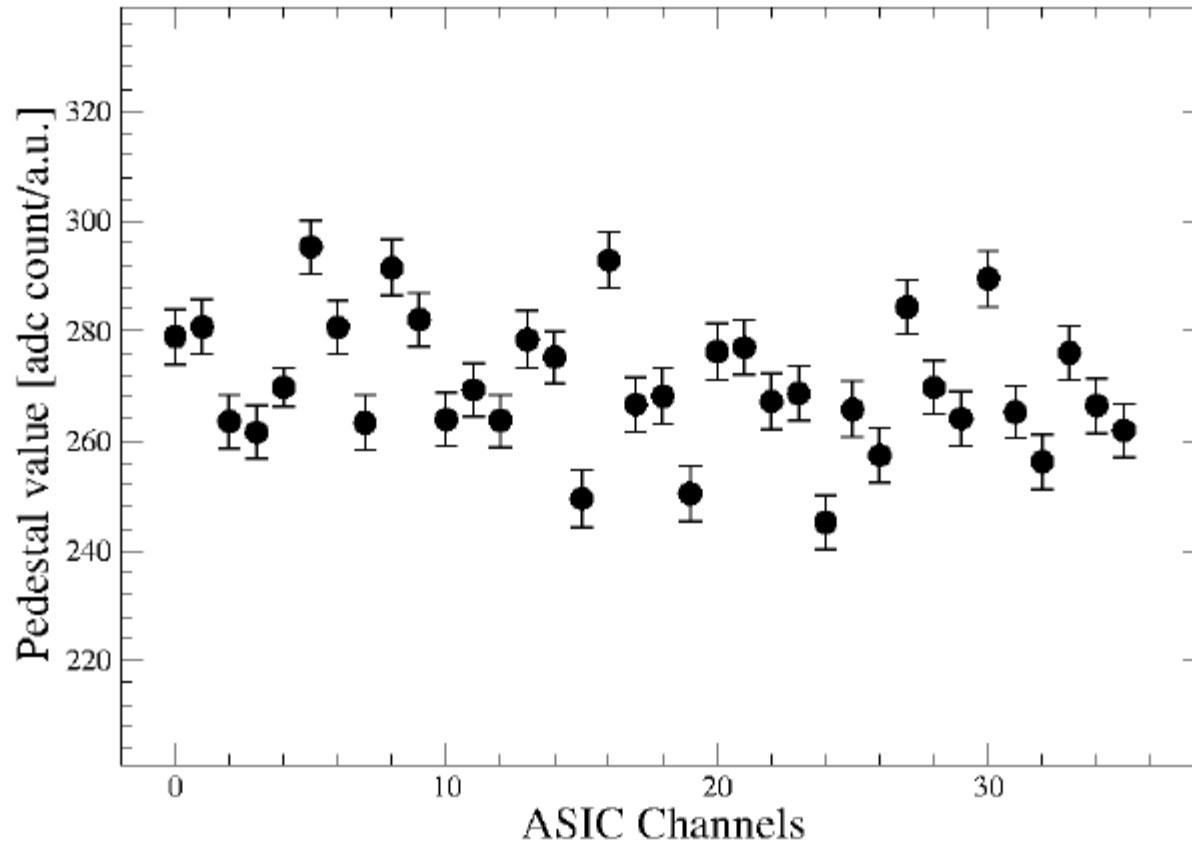
Pedestal study:

x axis interval 100 – 400 ADC Count



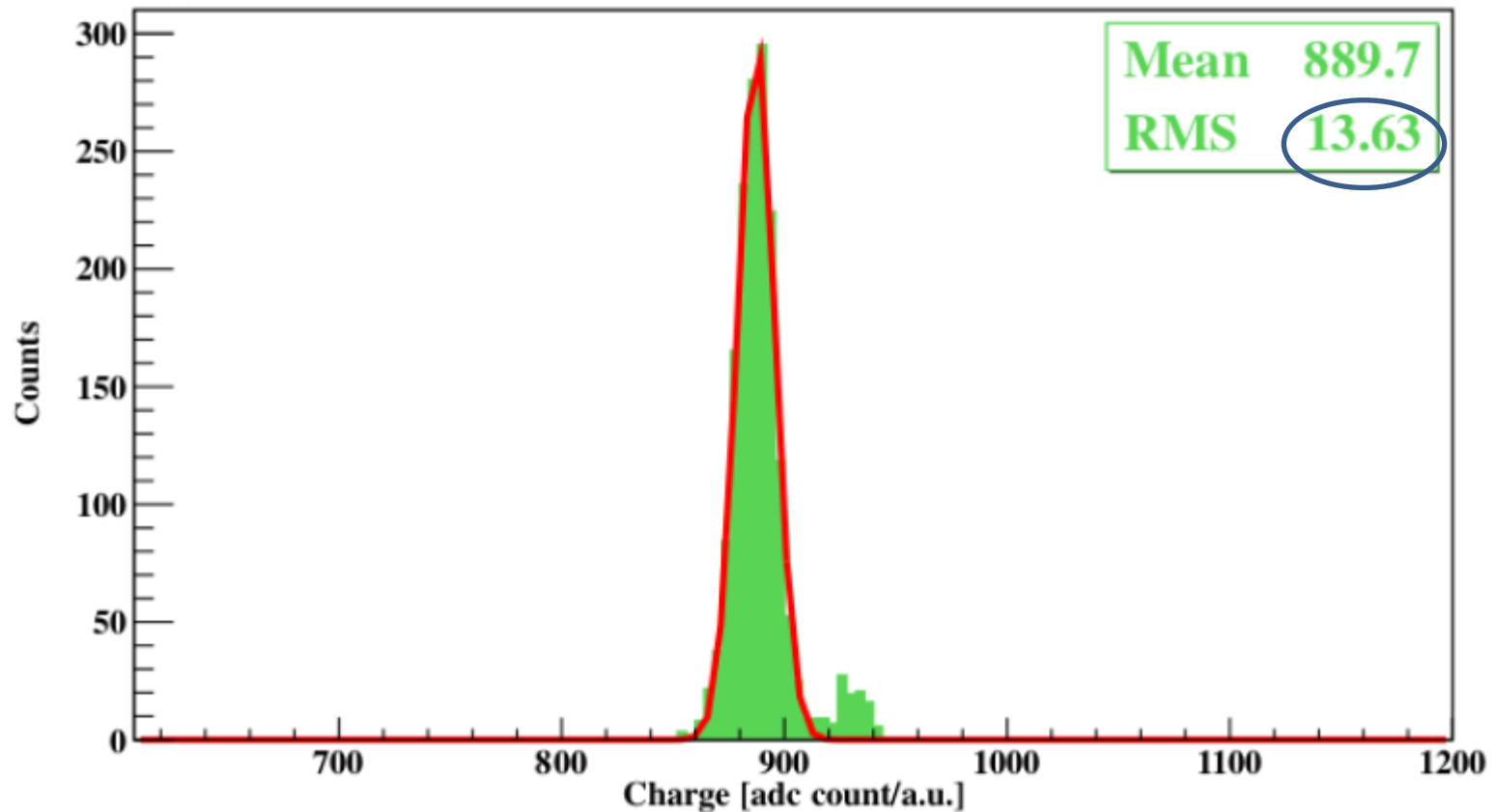
Pedestal (noise) value for 36 channel and asic

Pedestal study:



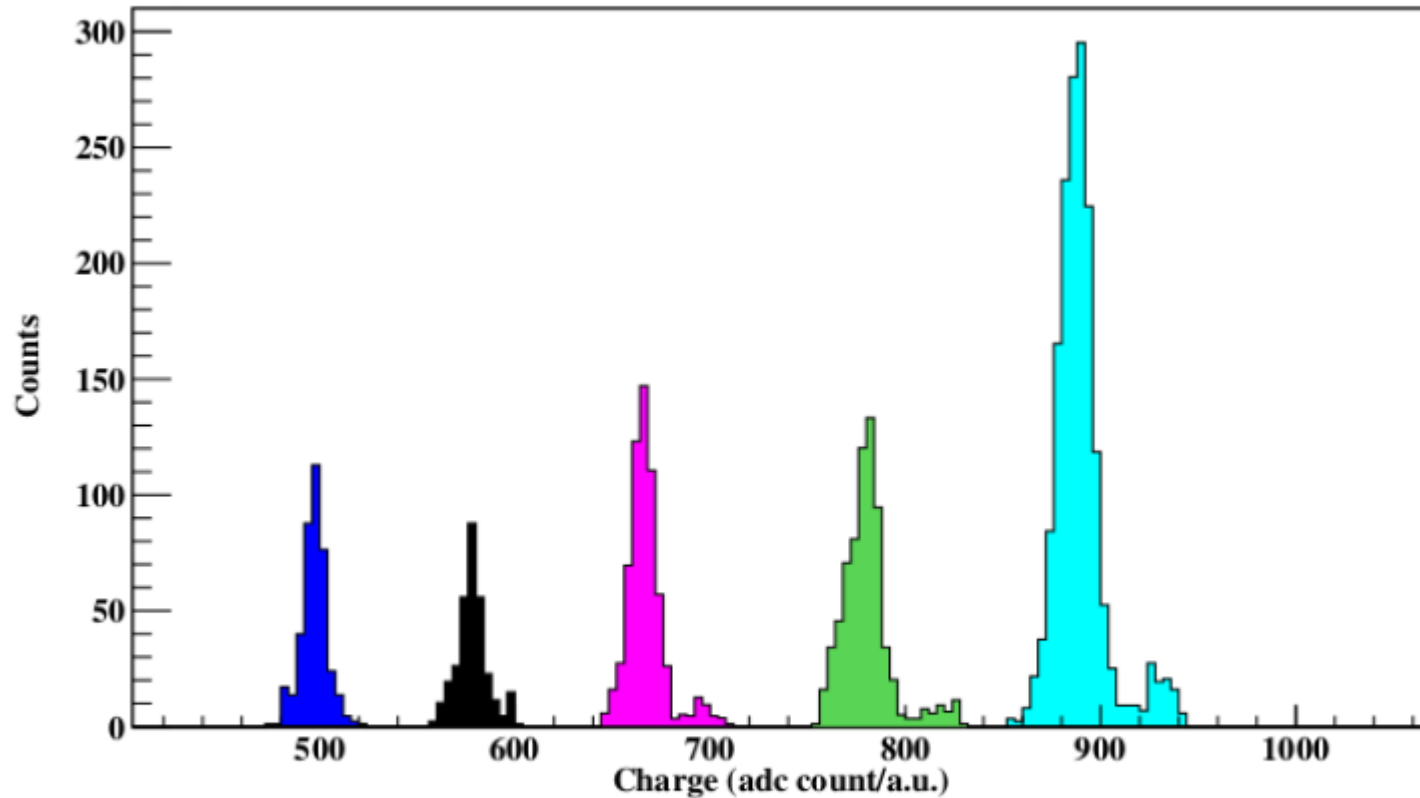
Pedestal (noise) value distribution for 36 channel

Study with injected charge:



Charge value value for one channel

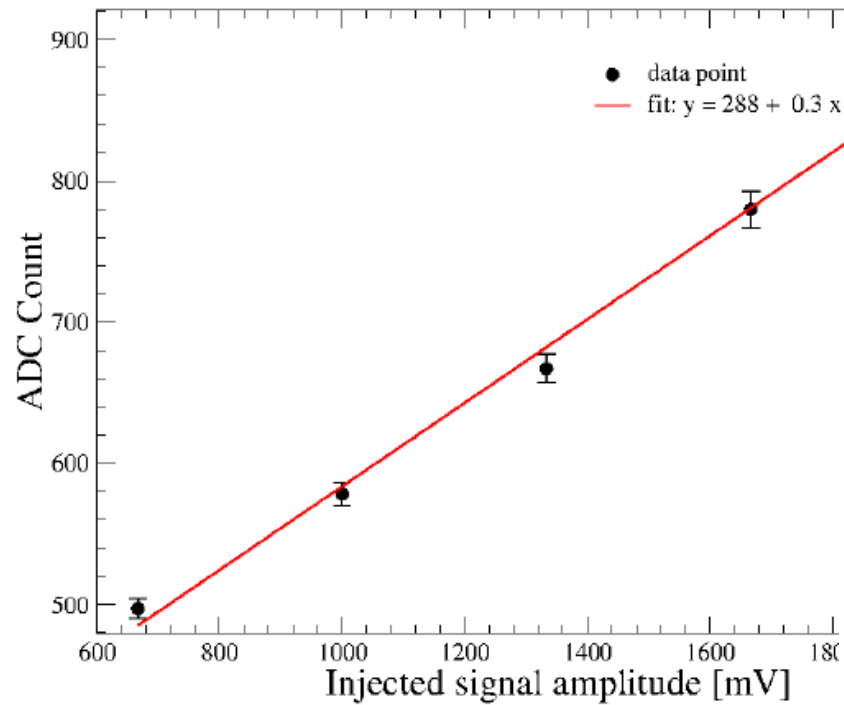
Study with injected charge:



Charge value distribution for different injected charge for one channel

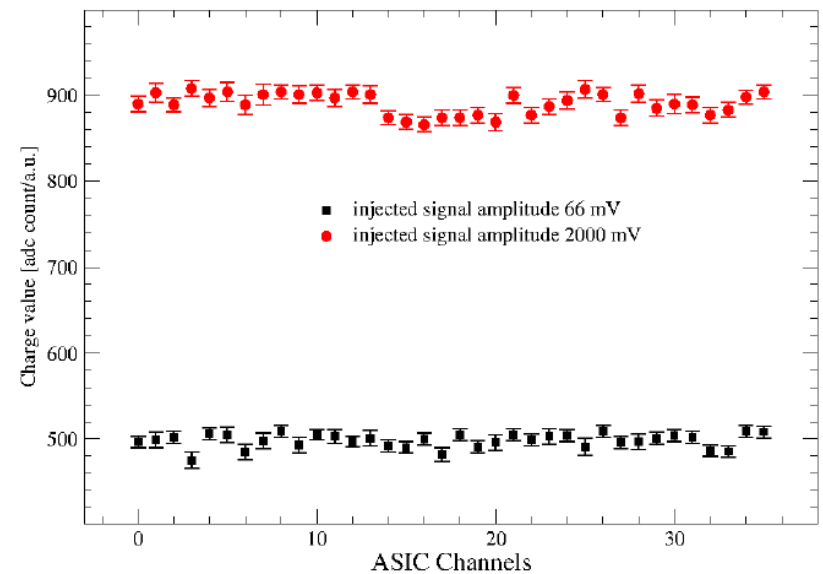
660 mV 1300 mV 2000 mV
1000 mV 1600 mV

Study with injected charge:



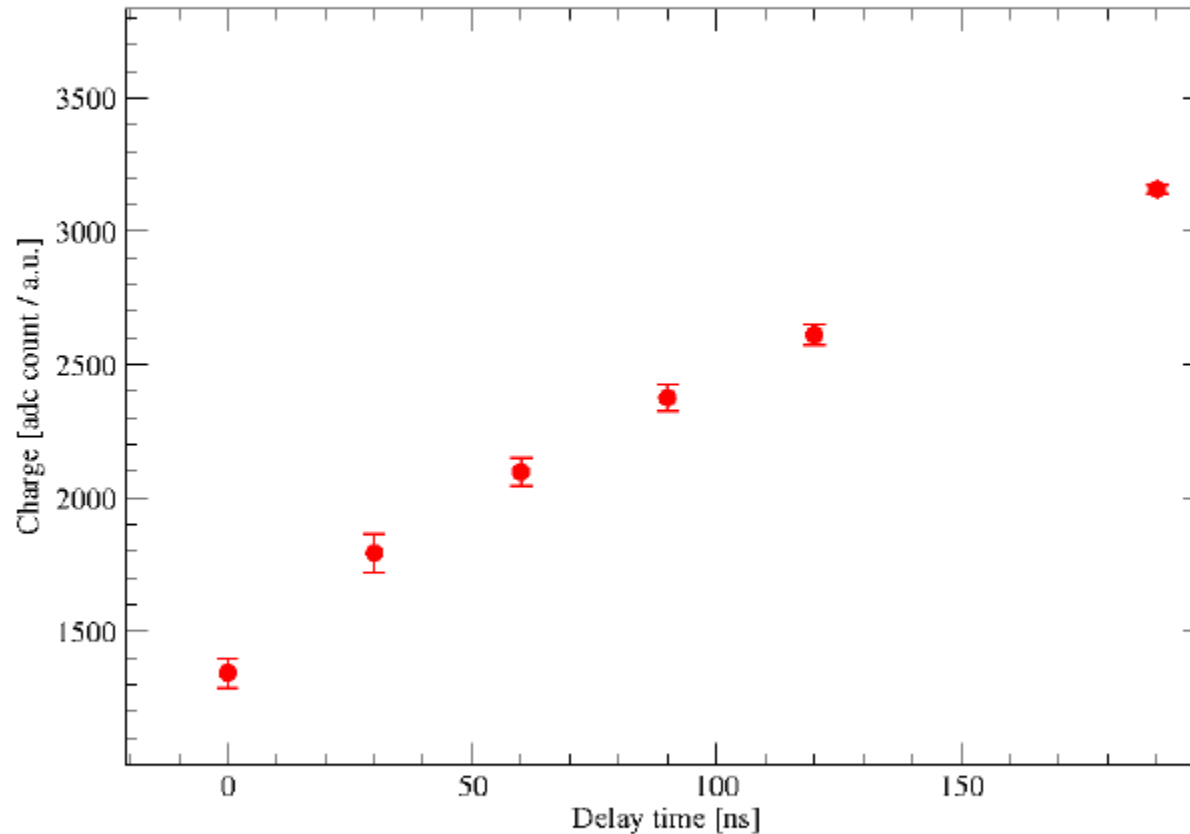
Calibration curve for one channel:

Study with injected charge:



Charge value distribution for all 36 channel

Study with injected charge:



**At high charge injection the external hold position on time varied
The value of charge varied accordingly to external hold position**

Conclusion

- Have implemented DAQ & some pieces of software
- Basic detector tests with spiroc2 (no physics signal can be seen)

- Will work (hopefully) on detector itself using SKIROC2
 - Chips being packaged, nice test results@OMEGA
 - New FEV board
 - Conservative design
 - Decoupling capacitances
 - Chips in package (no naked dies)
 - “U” cross section of the slab : single detection layer (ease of making it)
 - Final design Q1’2013

FEV8

