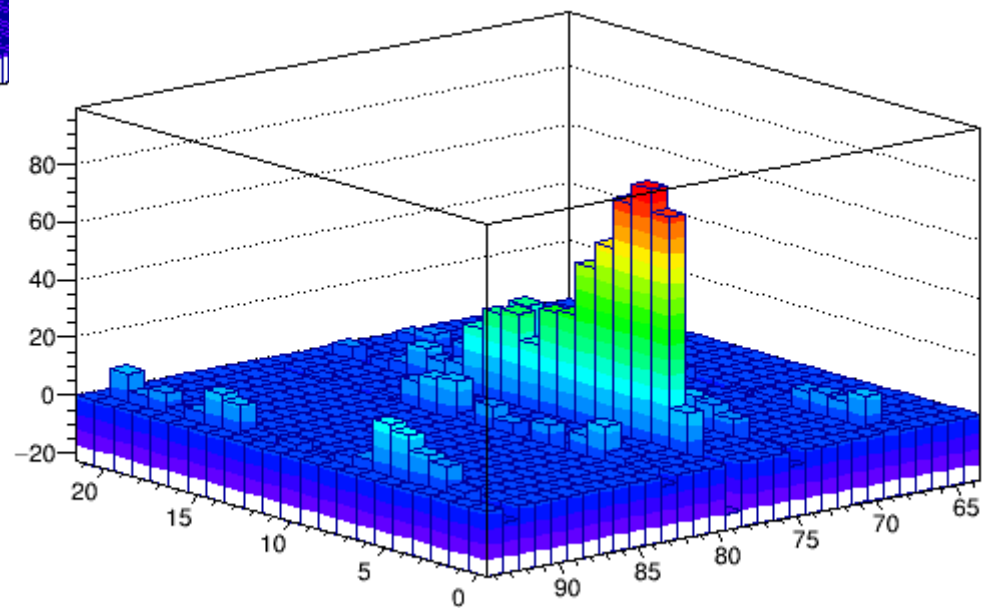
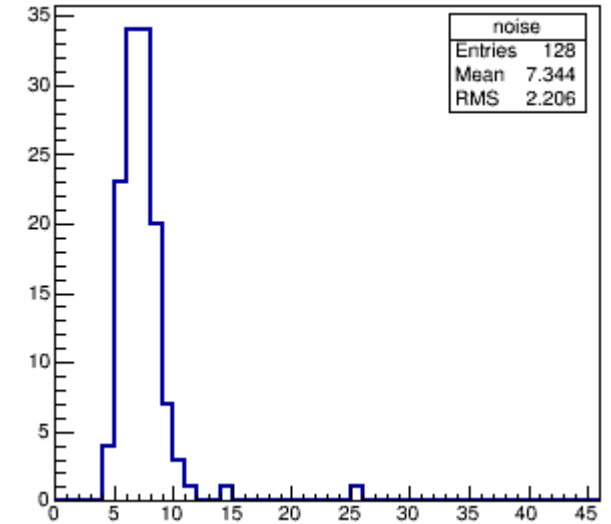
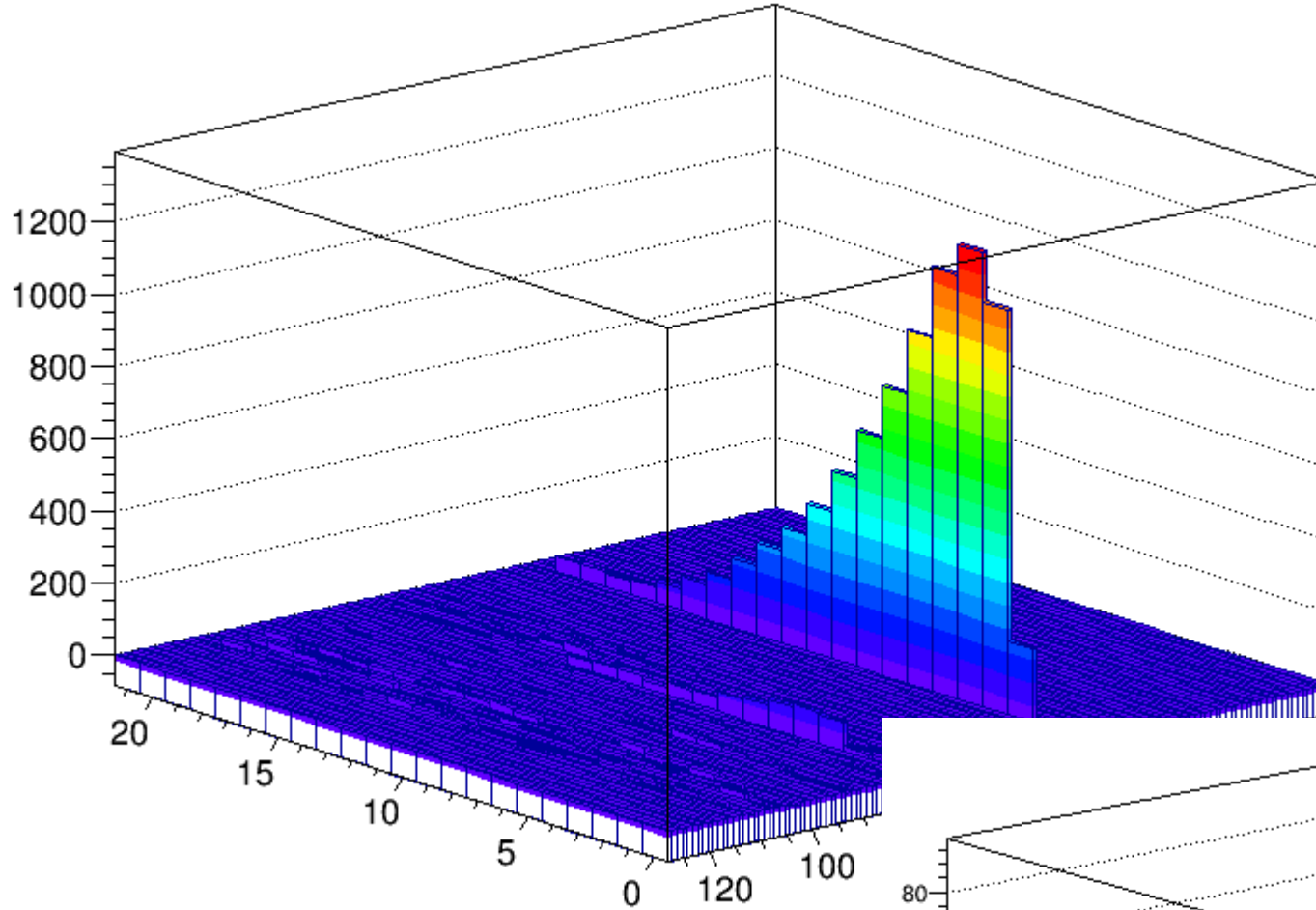


APV 25 Calibration with External Pulse

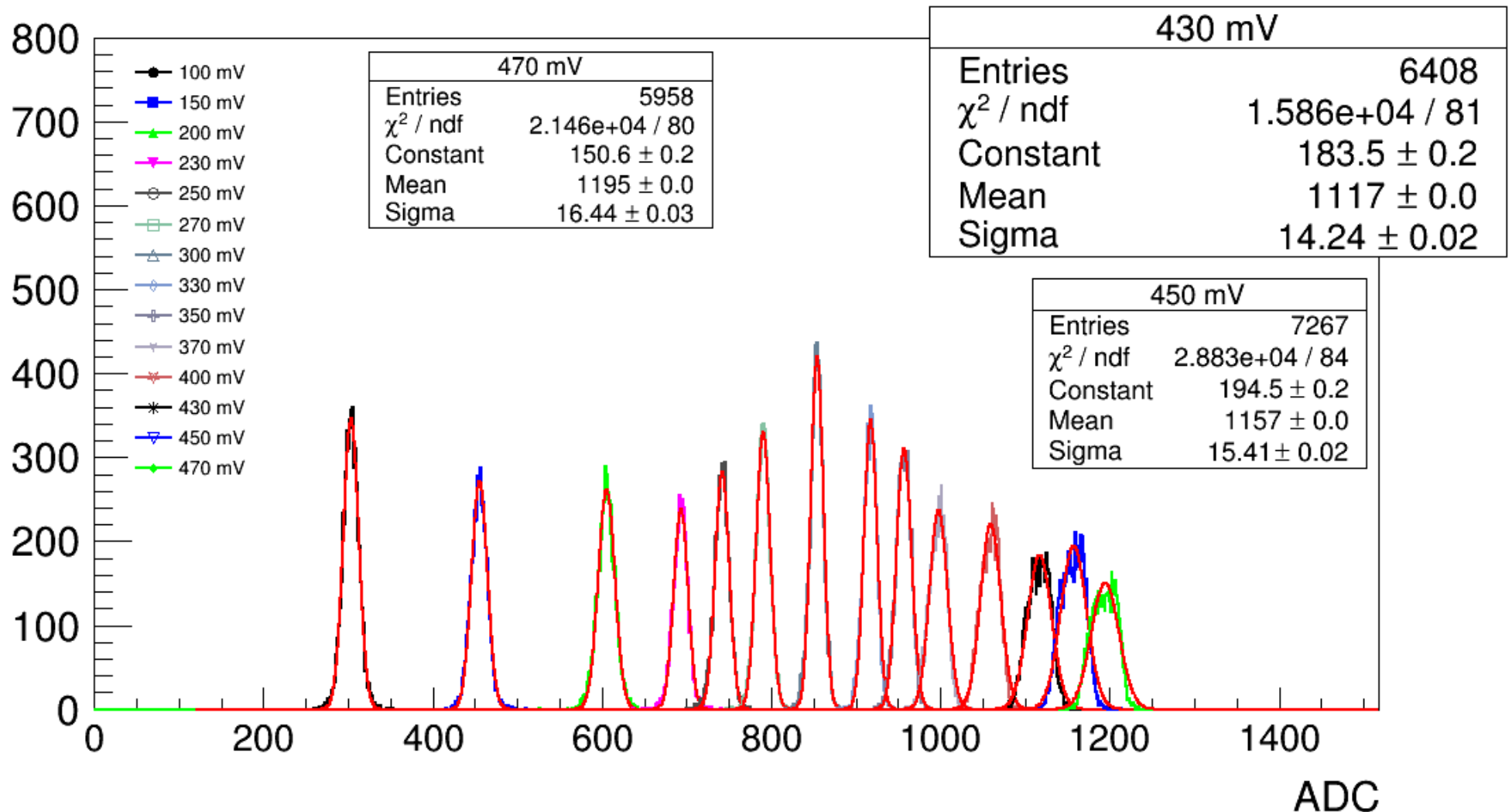
Borysov Oleksandr, TAU

Clustering WG meeting
November 01, 2017

Pedestal, Noise, Raw Signal



Pulse Response w/o Charge Divider

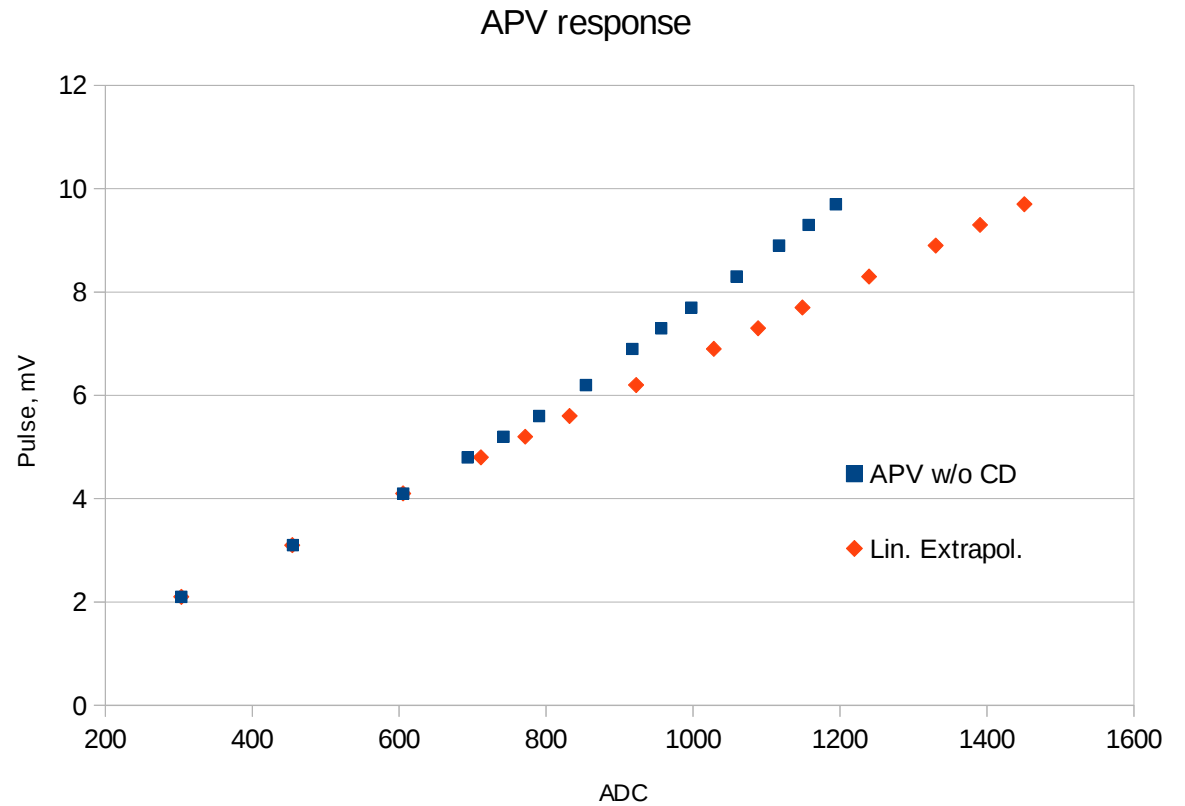


Pulse calibration

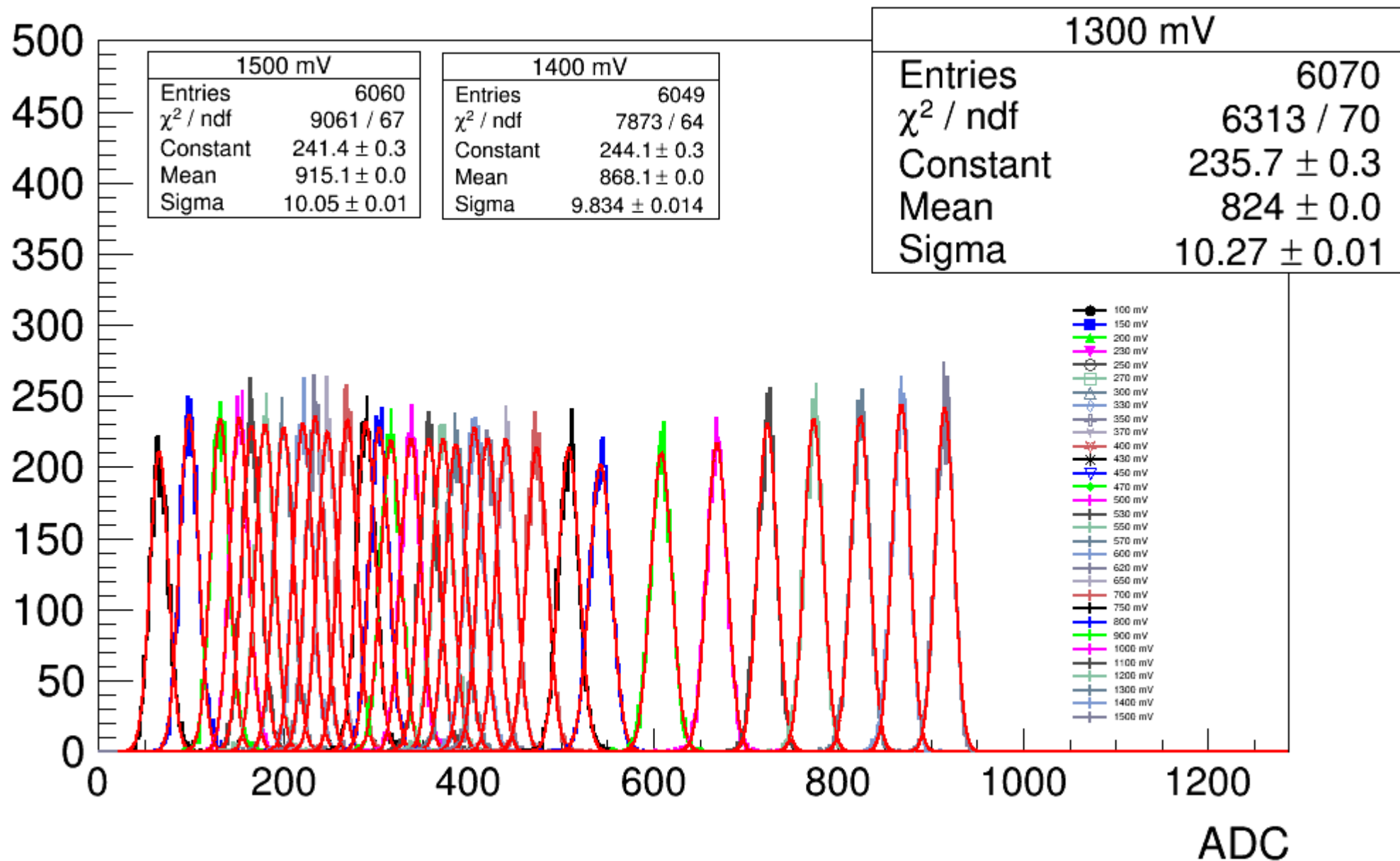
Capacitor for pulsing:
 $C_p = 3.1 \text{ pF}$;

Pads capacitor:
 $\sim 7 - 17 \text{ pF}$,

These will be used
measurements.



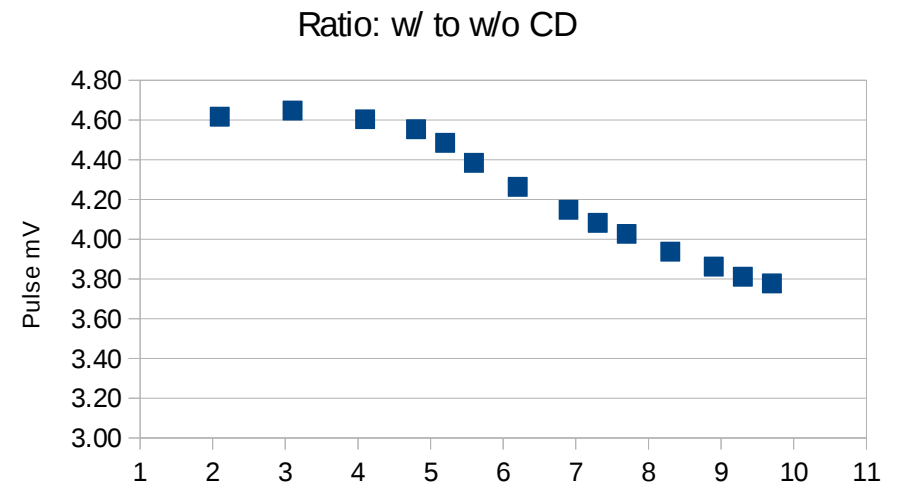
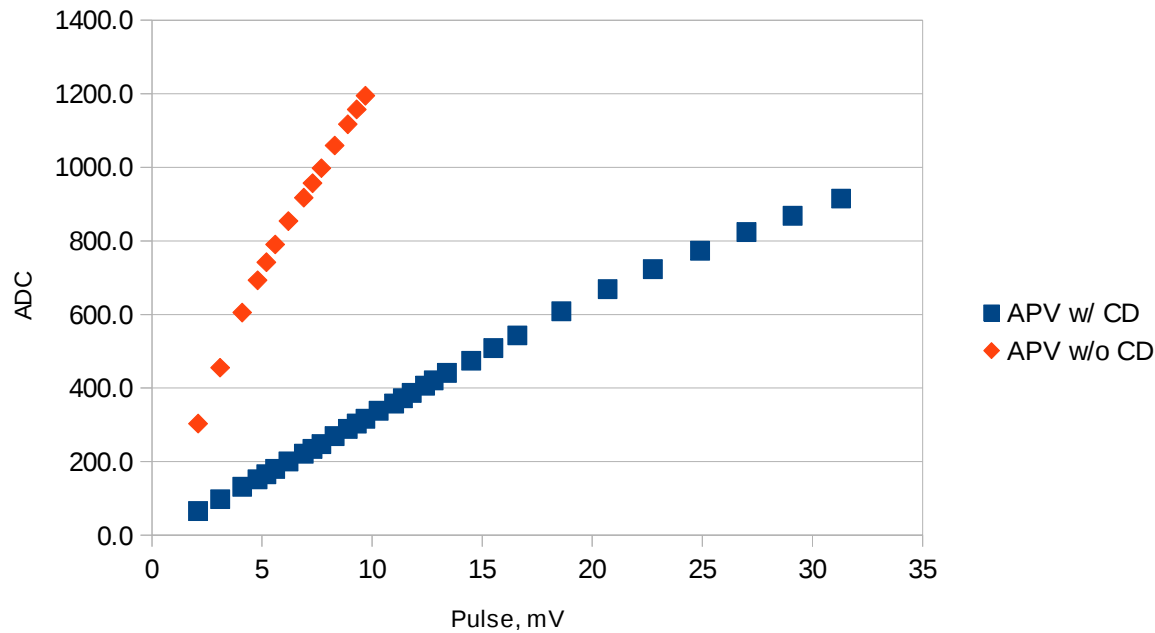
Pulse Response w/ Charge Divider



Response w/ and w/o CD

Vpp (mV)	Vpp atten (mV)	APV w/ CD	APV w/o CD	Ration
100	2.1	65.7	303.5	4.62
150	3.1	98.0	455.3	4.65
200	4.1	131.5	605.5	4.60
230	4.8	152.3	693.3	4.55
250	5.2	165.4	742.0	4.49
270	5.6	180.3	790.5	4.38
300	6.2	200.3	854.2	4.26
330	6.9	221.2	917.4	4.15
350	7.3	234.4	956.9	4.08
370	7.7	247.8	997.7	4.03
400	8.3	269.1	1059.4	3.94
430	8.9	289.3	1117.2	3.86
450	9.3	303.7	1157.4	3.81
470	9.7	316.3	1194.6	3.78

Response w/ and w/o CD



Conclusions

- APV 25 shows non linear response after 700 ADC counts.
- Ratio between the APV response with and without charge divider is around 4.6.
- Continue measurements to get higher statistics: different input capacitors, APV channels, charge dividers.
- Study parasitic signal in another APV channel when the signal in the channel with a pulse becomes high, more than ~ 1000 ADCs.