

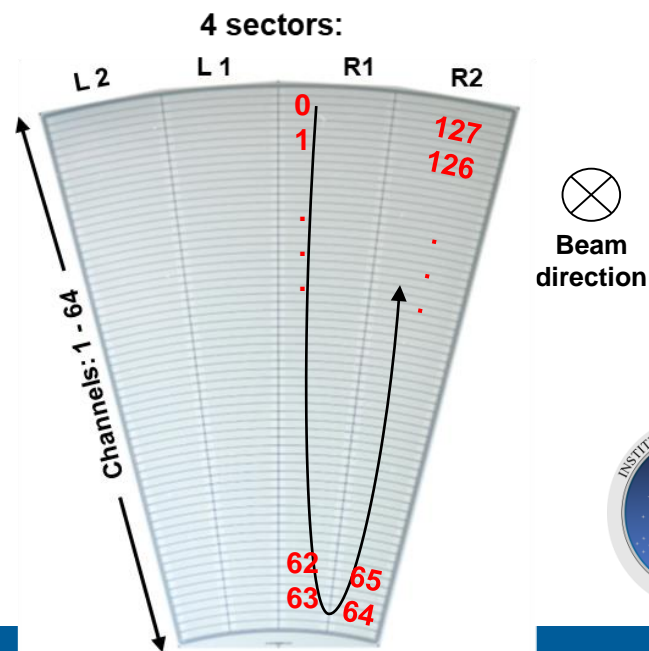
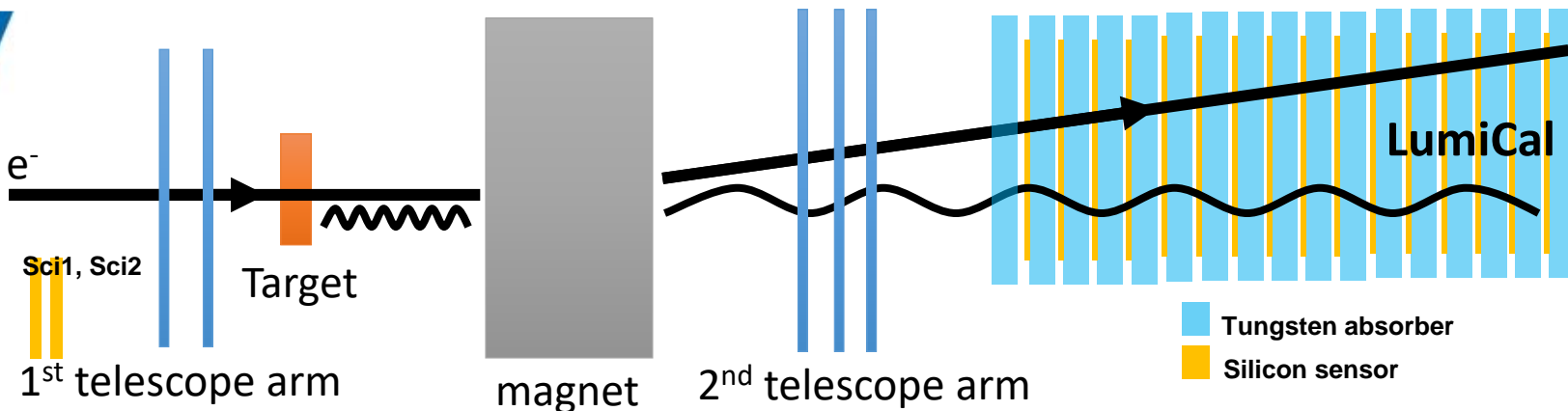
TB2019 – pedestal analysis

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Experimental set-up

- ❑ Test beam at DESY with 1 – 6 GeV electron beam
- ❑ ALPIDE telescope – 2 arms, 1st arm consists of 2 layers and 2nd arm consists of 3 layers;
- ❑ Target of tungsten with 90 μ m thickness;
- ❑ **Lumical** calorimeter consists of 16 Si sensors with one absorber layer placed in front of each active sensor layer;



Electronics assembling

Si layers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
APVs*	1	1	2	2	2	2	2	2	2	2	2	2	2	1	1	1
FEC	2	2	0	0	0	0	0	0	0	0	1	1	1	1	2	2
HDMI cable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HDMI input	0	1	0	1	2	3	4	5	6	7	0	1	2	3	-	-

- FEC0, FEC1, FEC2 – can't work on the same time;
- FEC2 didn't work properly;
- A few configurations were tested during TB data taken;
- In the logbook there are runs for FEC0 and FEC1.

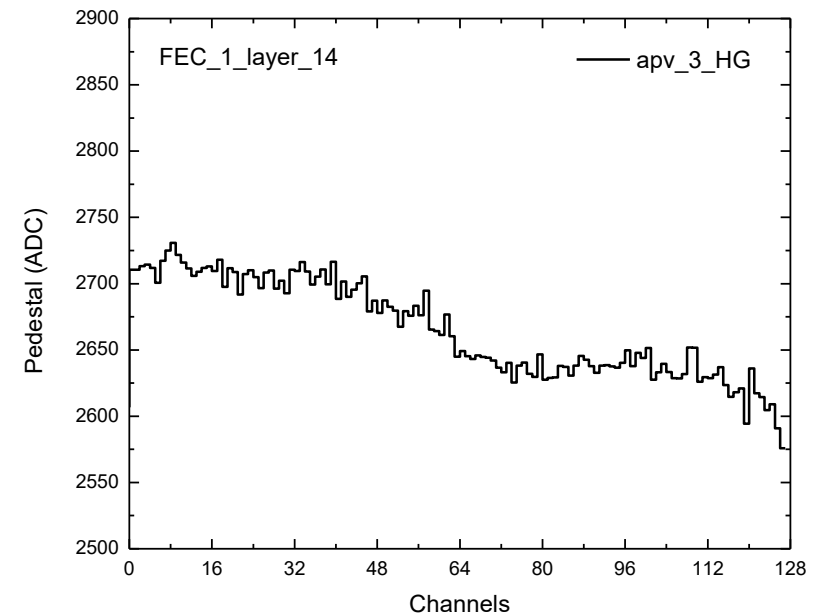
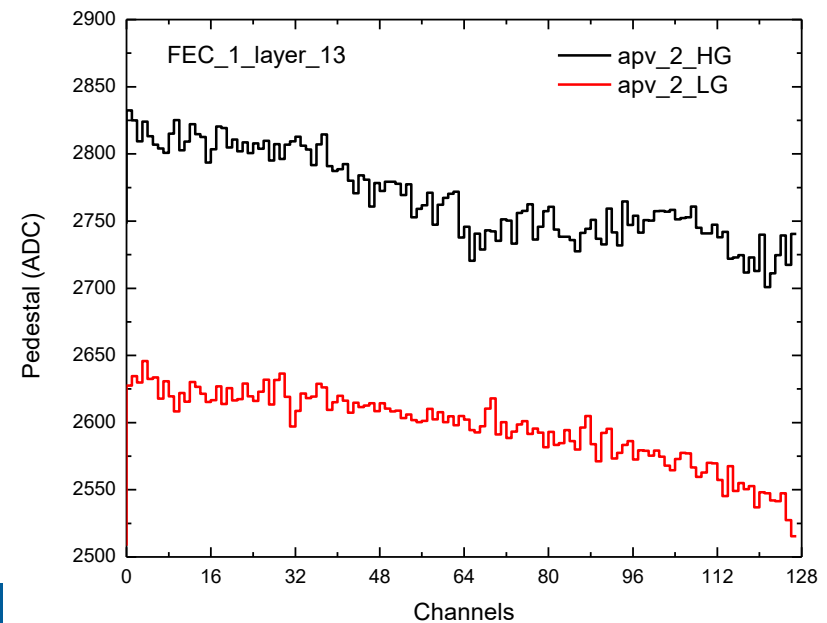
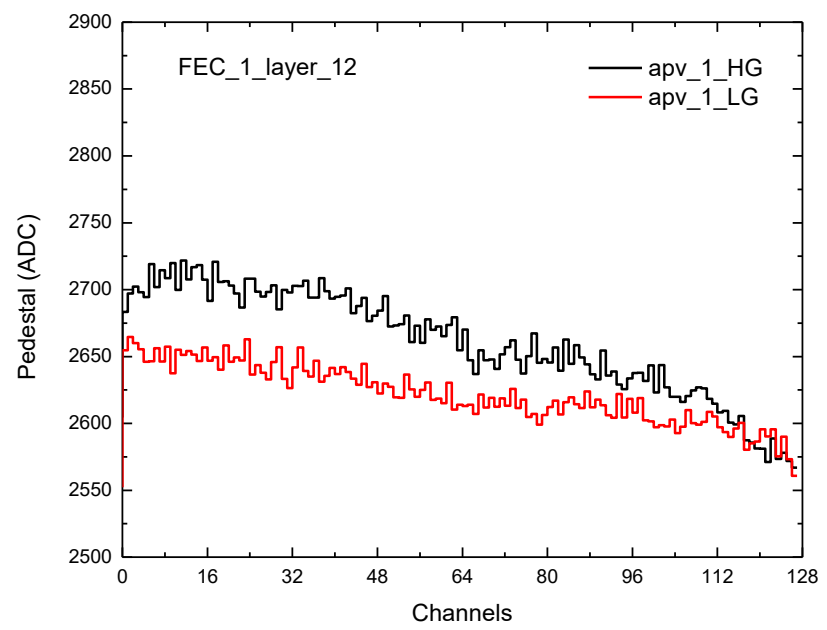
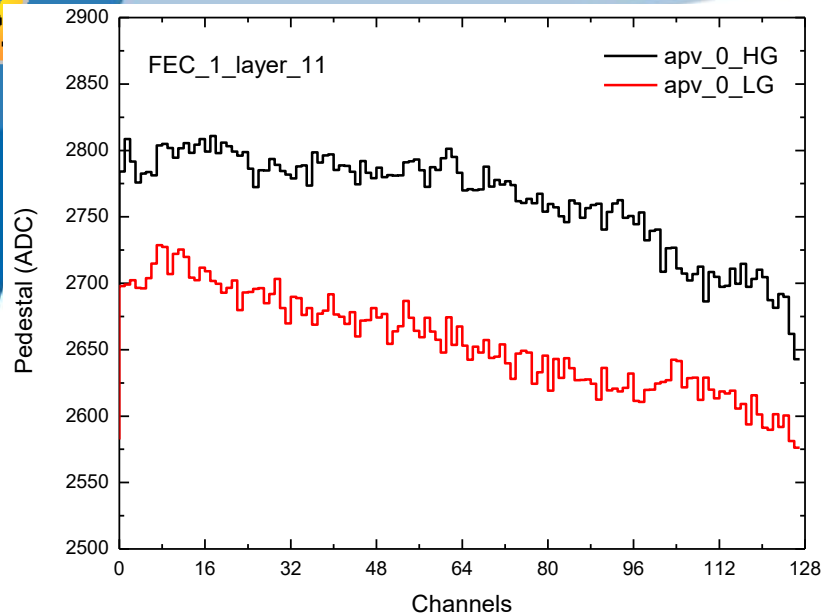
*Layers **3 to 13 connected** with double APV readout (Master and Slave), so only **128 pads** were read-out

Data analysis

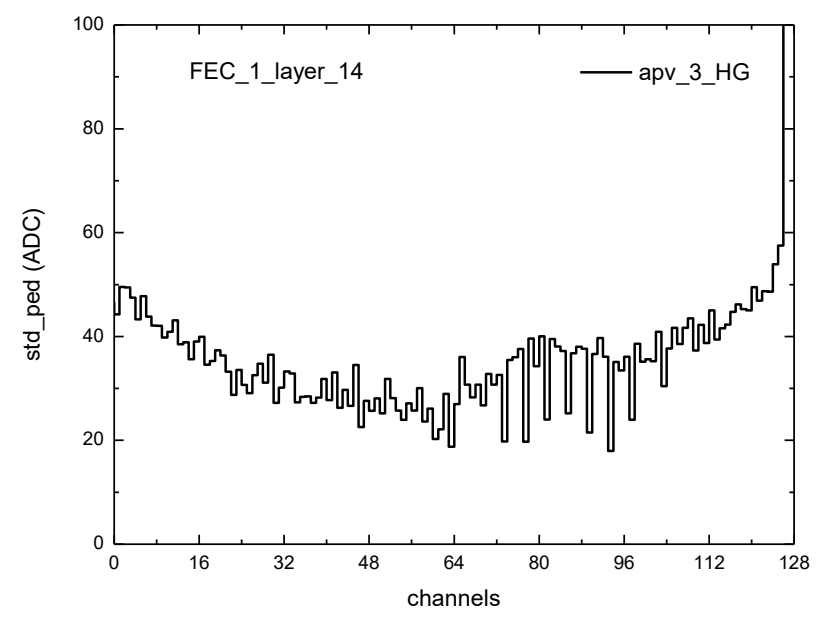
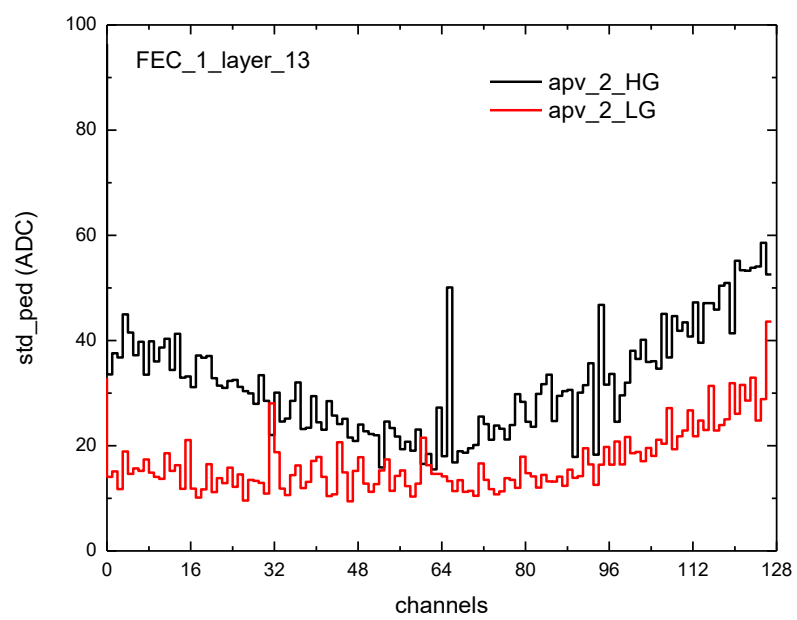
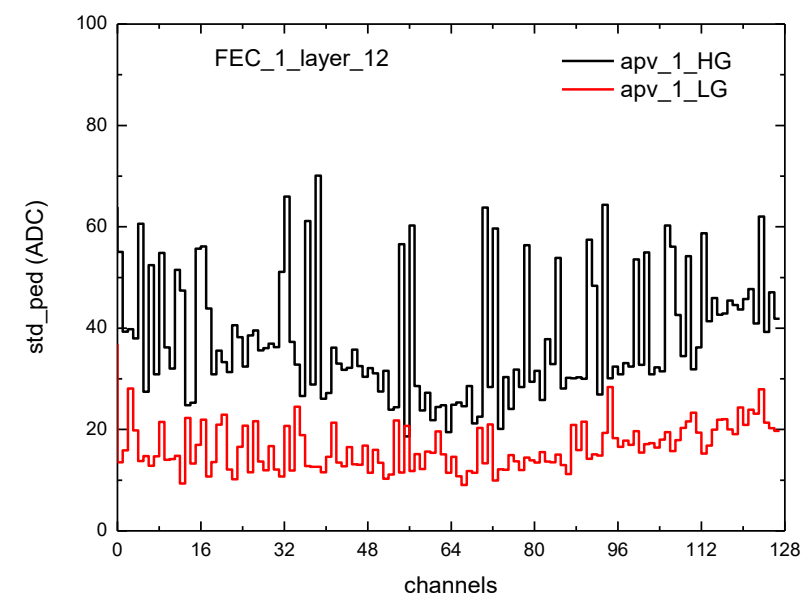
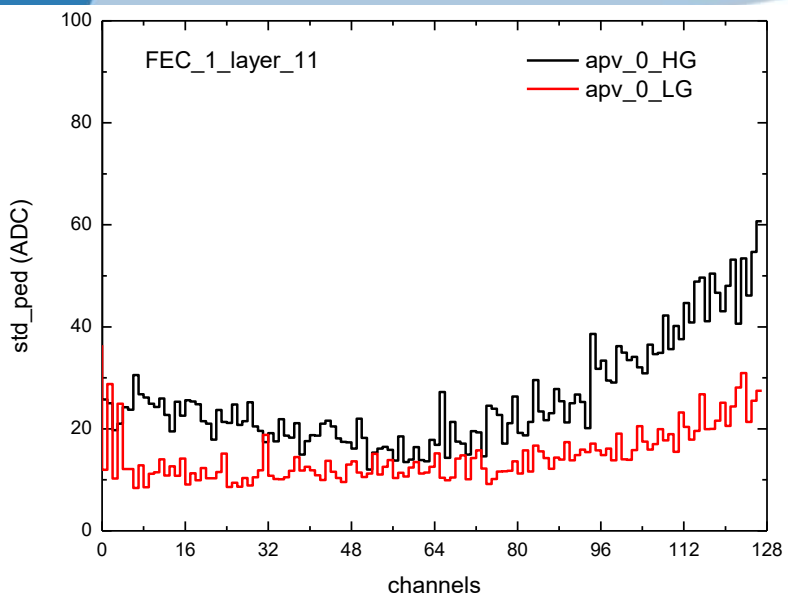
- Pedestal and noise from runs: 53 and 54

Run no.	FEC id	Si layer number	APV id – high gain	APV id – low gain
53	1	11	0	0
	1	12	1	1
	1	13	2	2
	1	14	3	-
54	0	3	0	0
	0	4	1	1
	0	5	2	2
	0	6	3	3
	0	7	4	4
	0	8	5	5
	0	9	6	6
	0	10	7	7

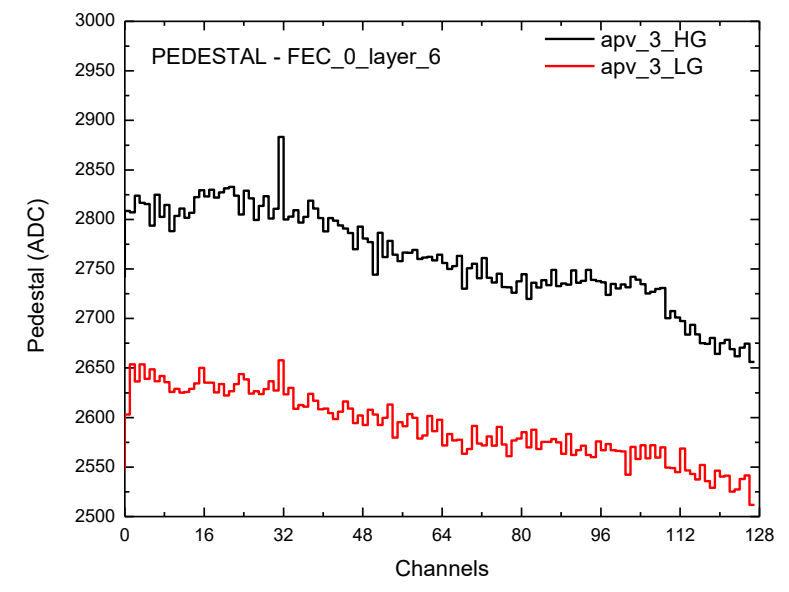
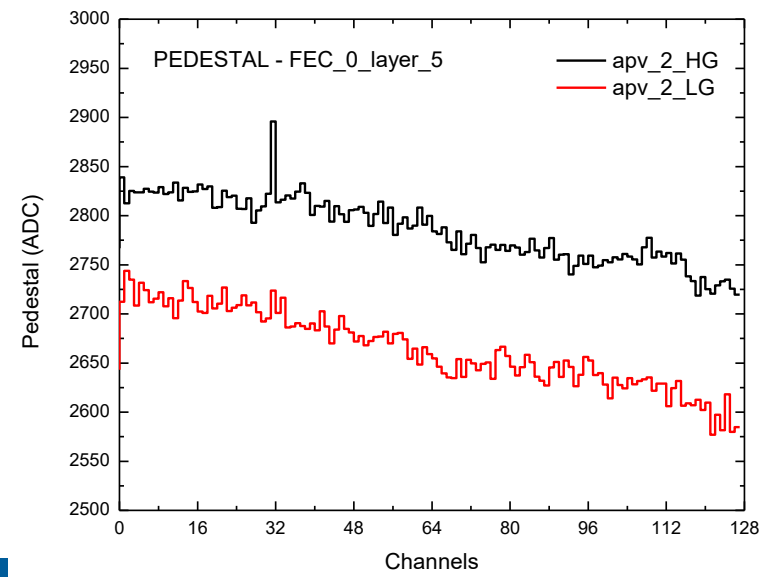
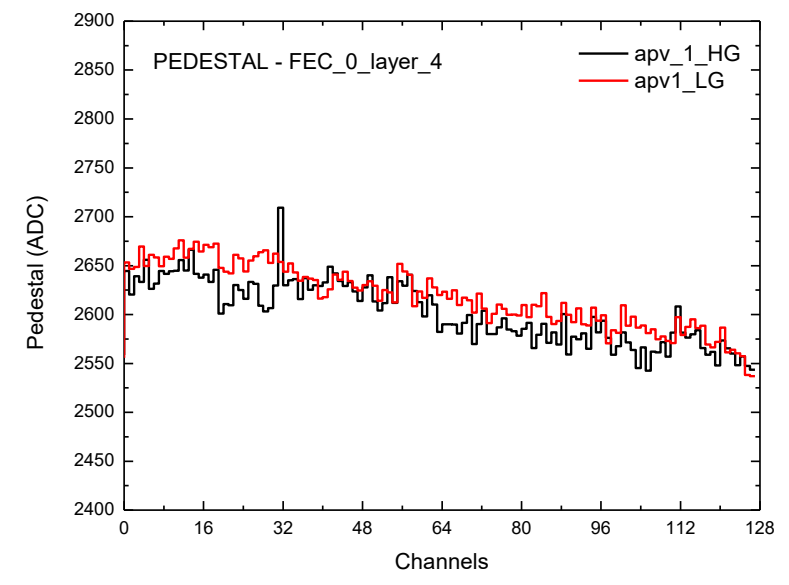
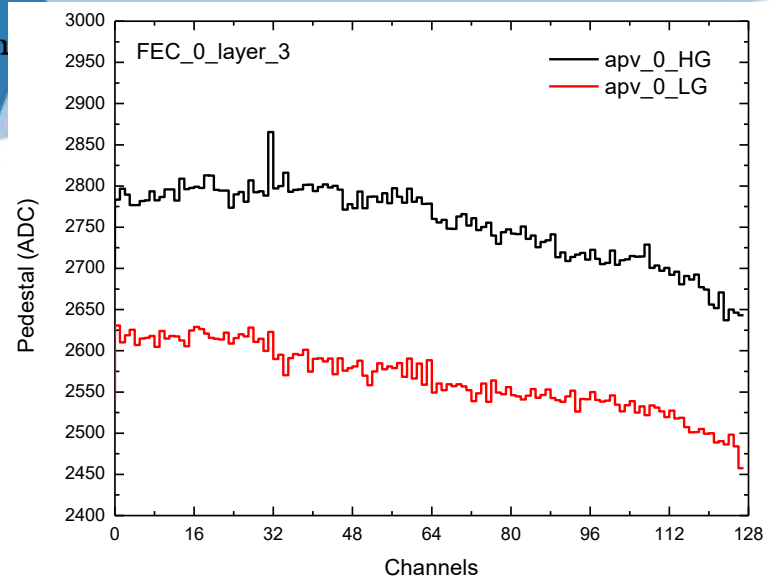
Pedestal distribution for all channels



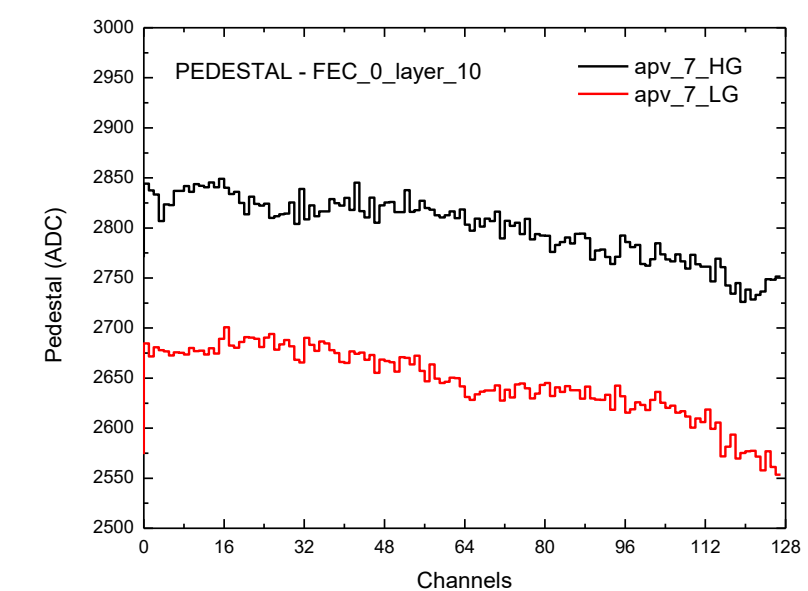
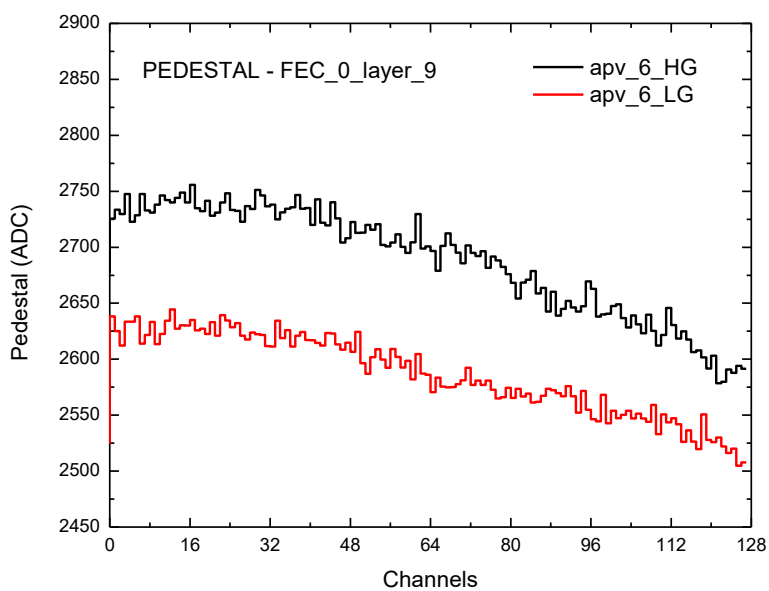
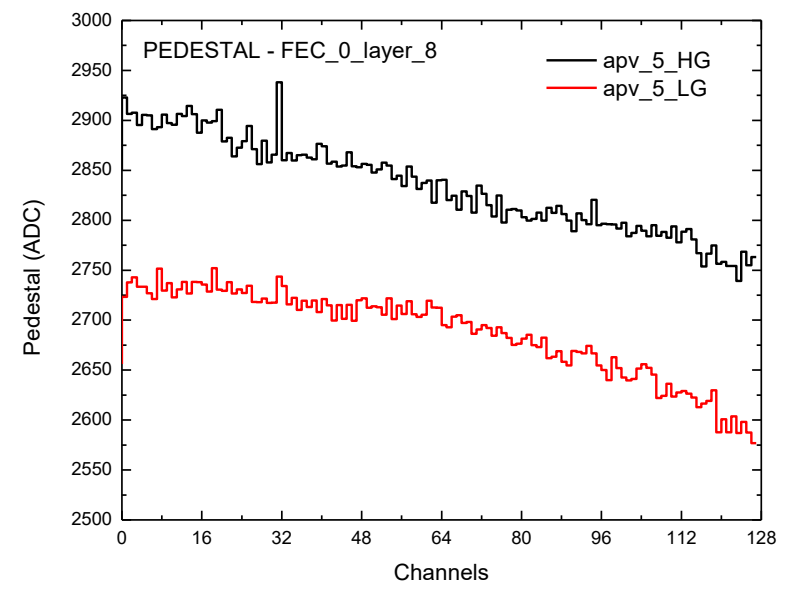
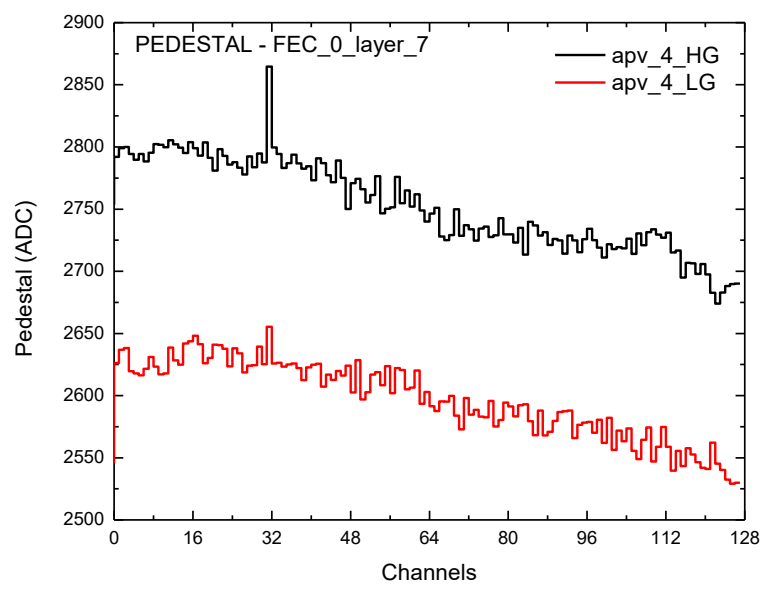
Noise distribution for all channels



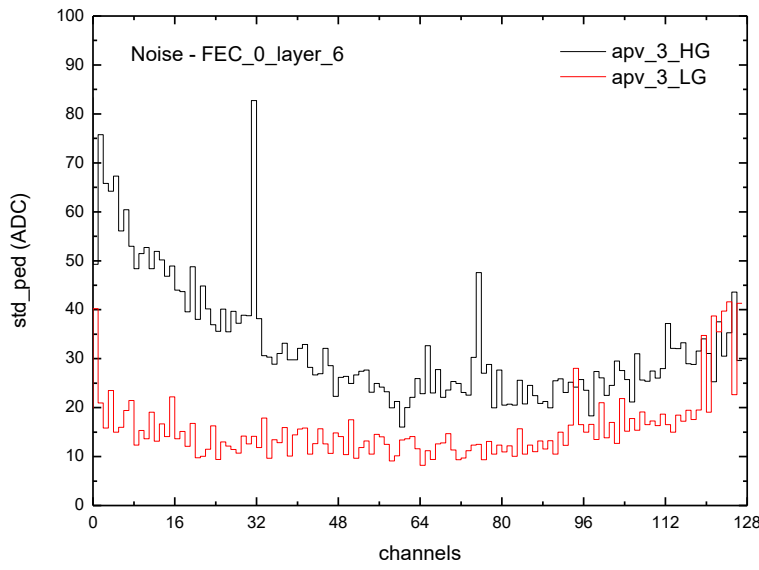
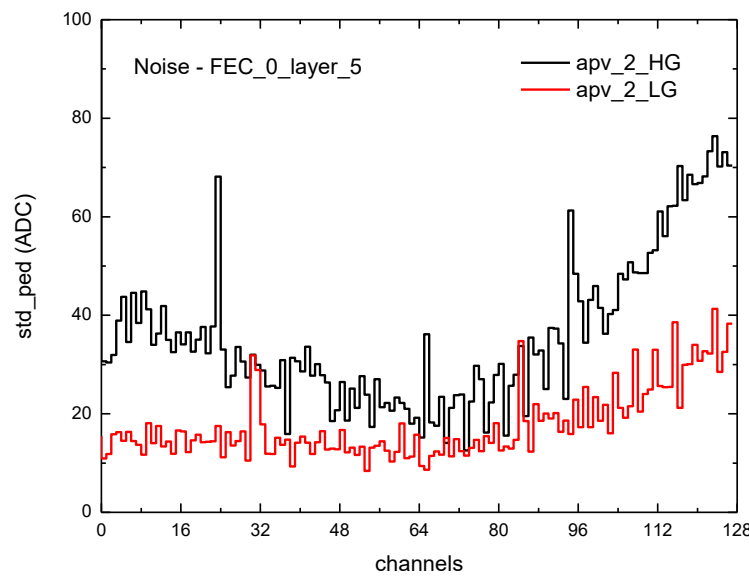
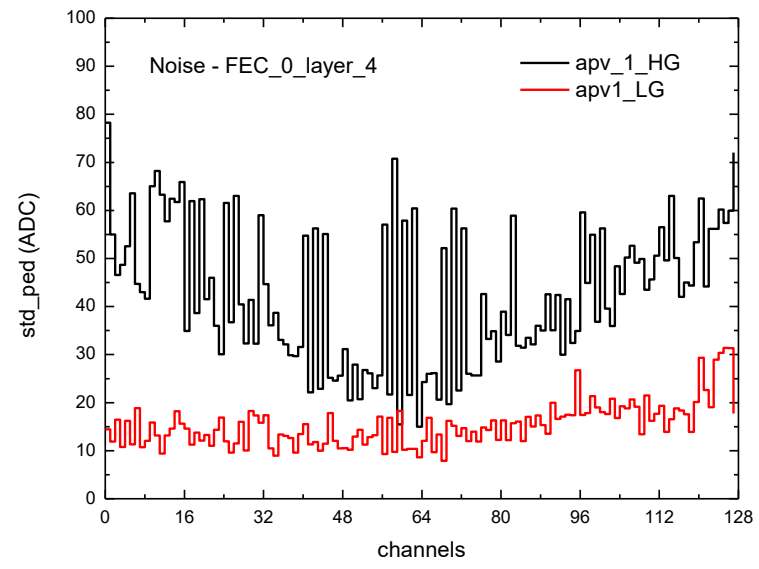
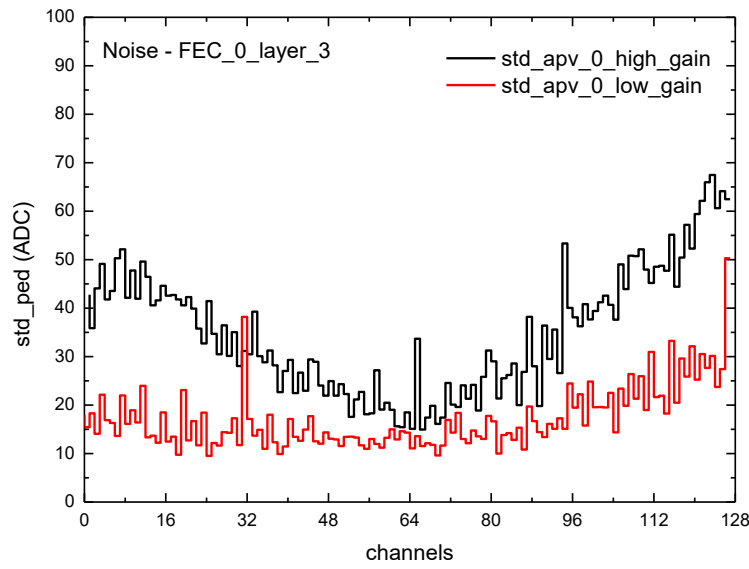
Pedestal distribution for all channels



Pedestal distribution for all channels



Noise distribution for all channels



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