

# FEB v6 tests : Pedestals

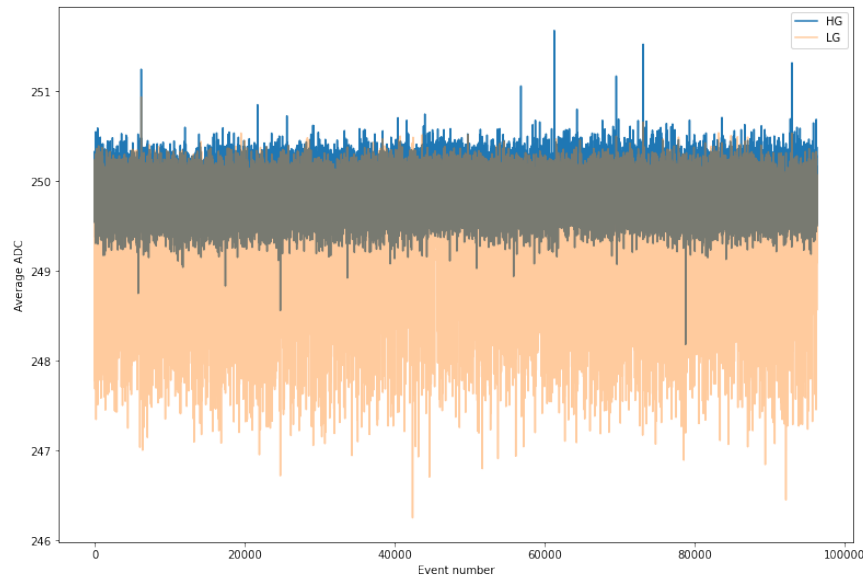
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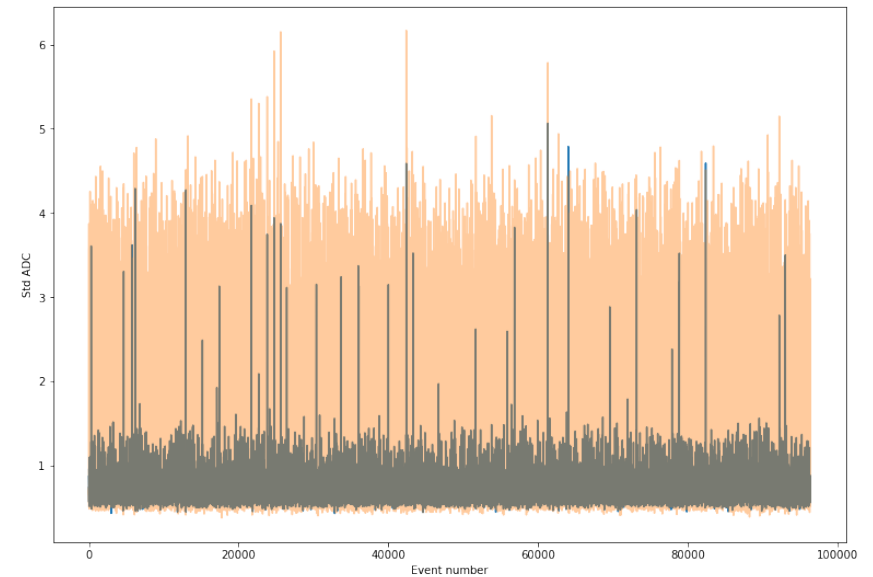
# Study of the pedestals with the FEB v6

- Dark pedestal runs (March 2021) with 2 FEB v6

Average value over all 14 pixels and all samples :  
- Spike and dips

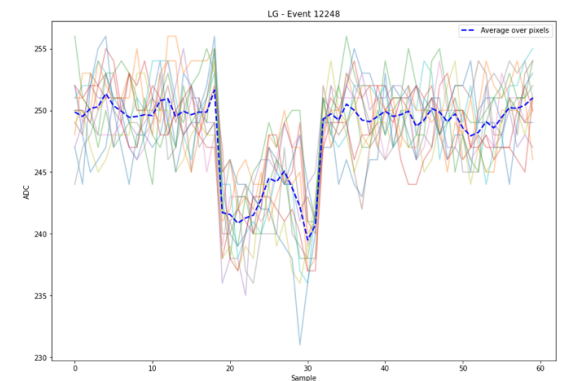
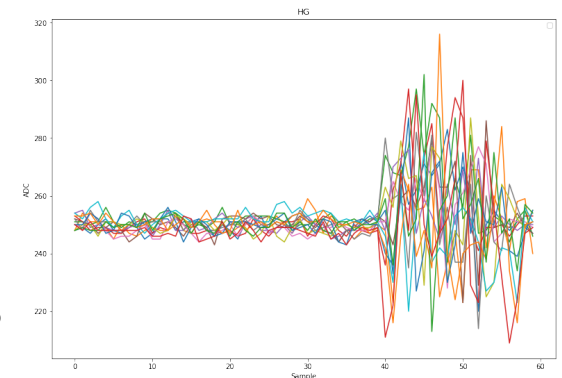


Standard deviation over all 14 pixels and all samples :  
- Noisy events in HG and LG



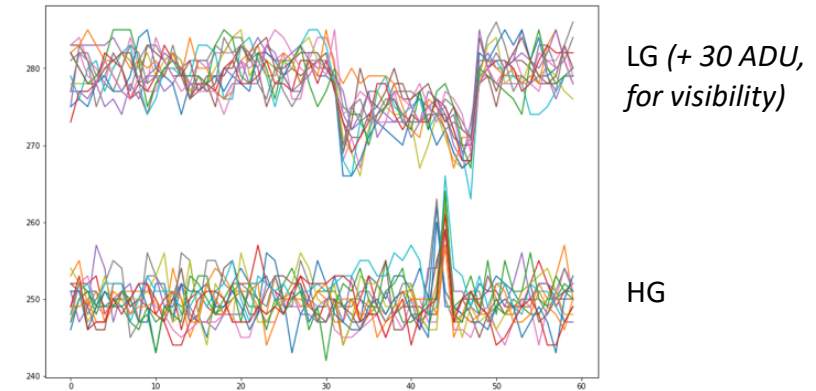
# Study of the pedestals with the FEB v6

- High noise in HG & LG -> empty memory events
  - Events not completely written in memory
  - Exemple of event -> HG waveforms of the 14 pixels :
    - Can be resolved by adjusting the DelayBusy parameter of the FEB
- « Dips » in LG : 1 to 16 samples affected :
  - Due to a trigger occuring during the readout
    - This is known and understood. The chip will be modified.
    - FEB v5 not affected (dead time while readout)



# Study of the pedestals with the FEB v6

- Spike in HG when dip in LG
  - Spike of  $\sim 10$  ADU in HG for  $\sim 0.01\%$  of the events (at 9kHz)
  - Issue with the chip, correction being implemented (latest news from this morning!)



- Noisy HG events : burst of noise in some pixels
  - Pseudo-oscillations at  $\sim 300$  MHz
  - Preferentially on some pixels
  - Same behavior with HV Off
  - Already present with FEB v5
  - Linked to the FPM?
- Very few other anormal events (already present with FEB v5)

