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Scintillator Digitizer Status

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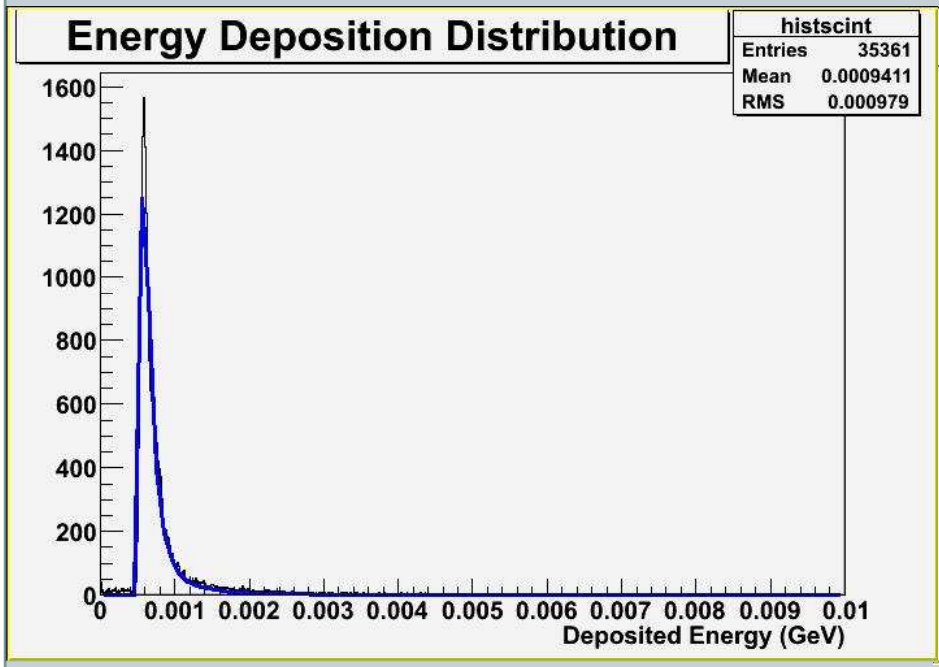
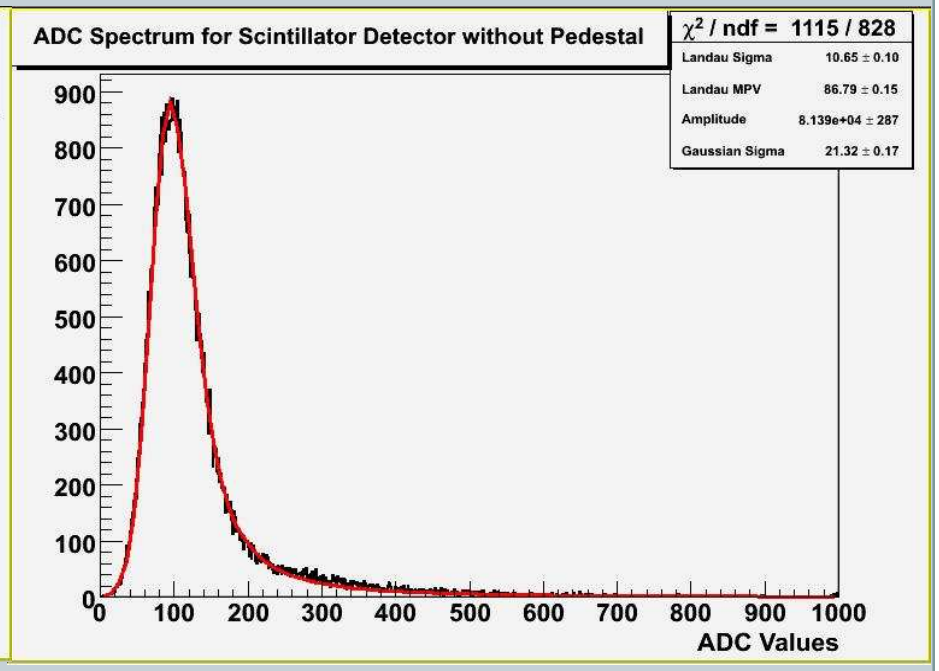
What did I do?

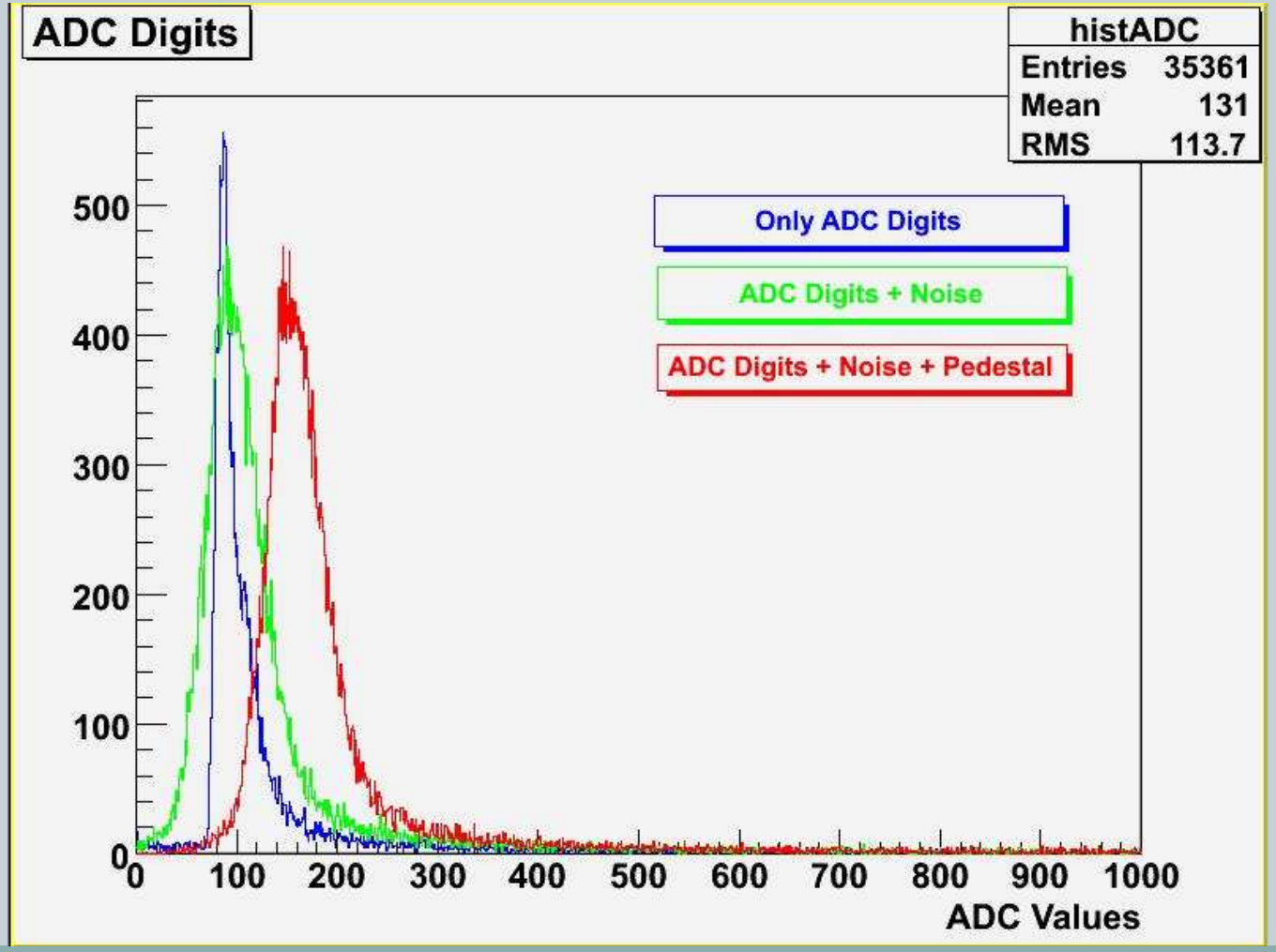
- I created ADC spectrum without pedestal plot from real data.
- Convolution of the Landau and Gauss fit function applied to get MPV
- Then, I created Scintillator Energy Deposition(ED) Distribution plot from MC root file.
- Landau function fit applied to ED plot to get MPV.
- Using conversion factor and adding noise and pedestal values, I got the digitized scintillator plot.

These are fitted ED plot from MC root file and ADC Spectrum from real data. I applied Landau function fit and convolution of Landau and Gauss function fit respectively. Then, conversion factor calculated from these plots MPV which equals to 1.48e+05 .

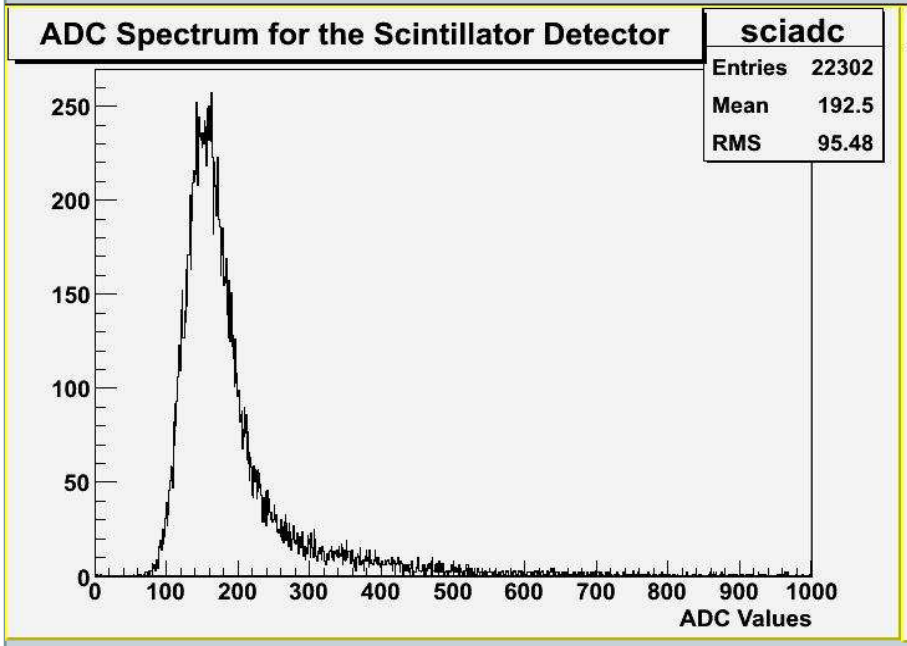


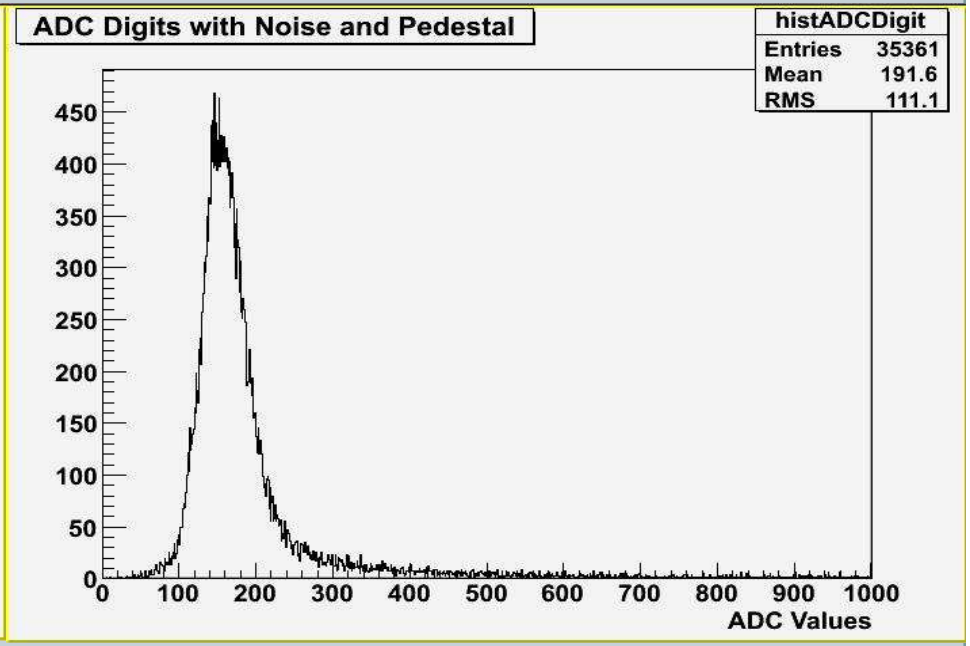


In addition to conversion factor, noise and pedestal values were added and I got digitized ADC values.



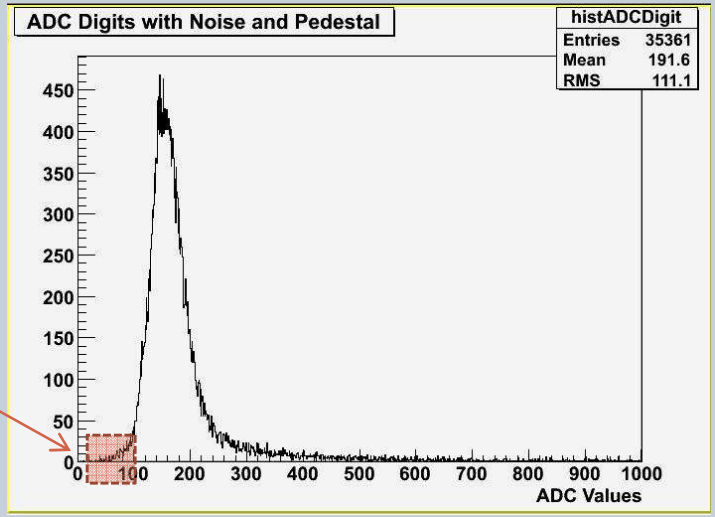
On the left hand side, ADC spectrum plot from real data (all thin targets) is showed. On the right hand side, ADC digits plot from MC root file is represented.





What is the next step?

- Scintillator digitization is almost done but there is some small values in digitized scintillator plot.
- I may use cut for these points

  or

  I can take some suggestion.