

AHCAL analysis workshop follow-up "Wrap_up"

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AHCAL Analysis Workshop

Desy, 18th Dec. 2018



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WUPPERTAL**

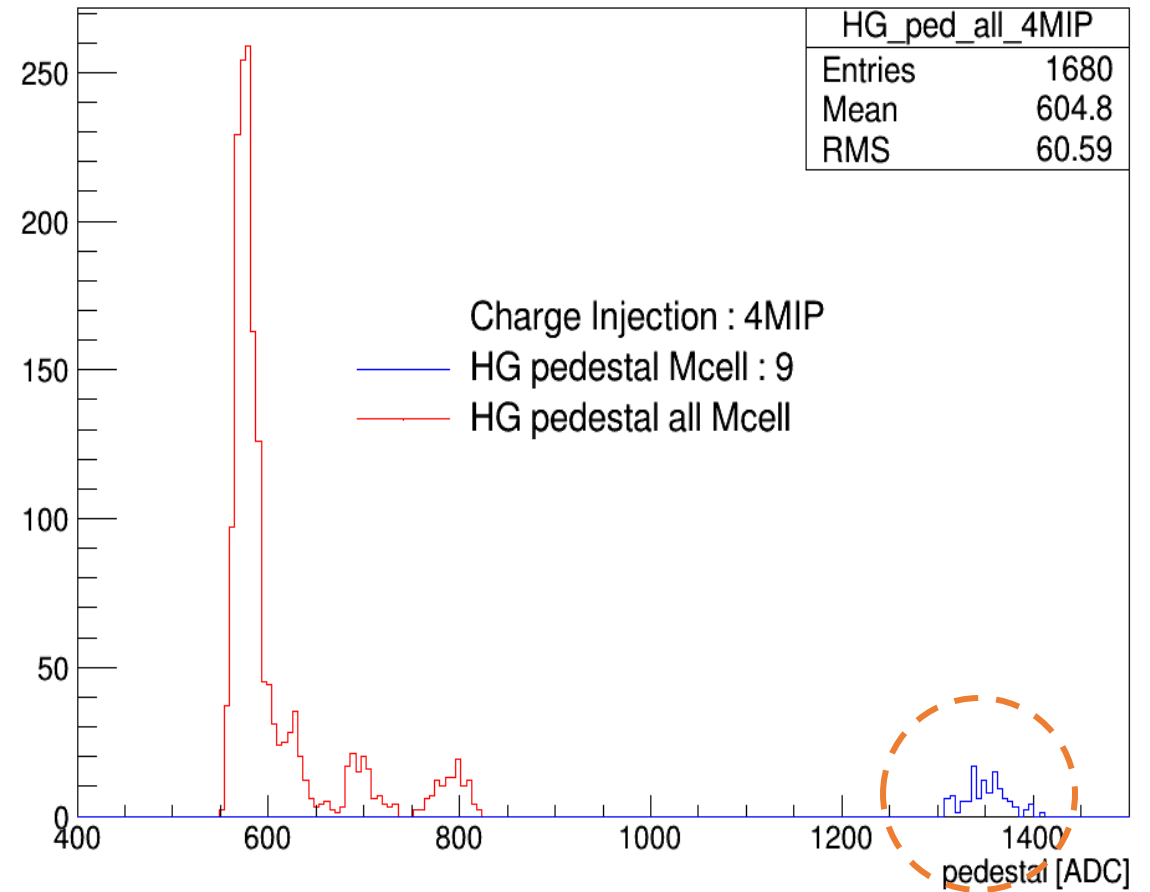
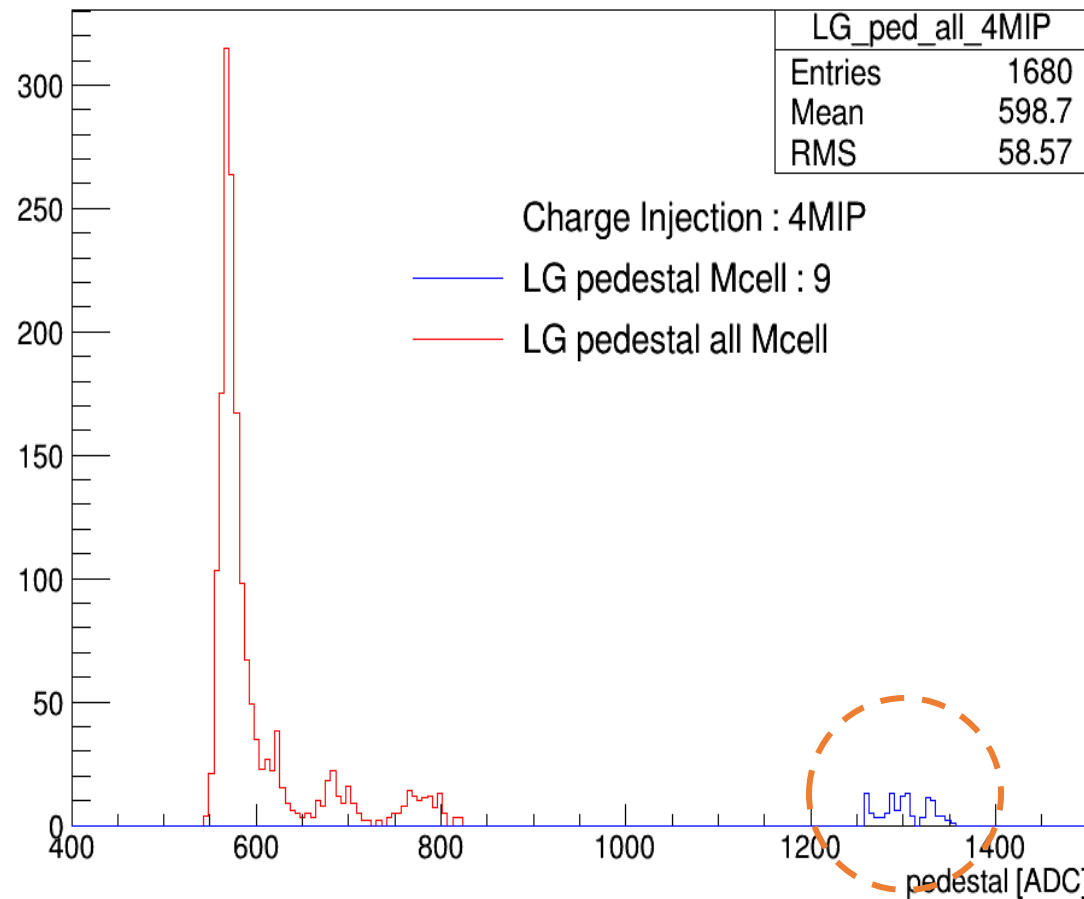


Plan :

- Checked the HG & LG pedestal and signal.
- First comparison between data and simulation for different number of pixels after the de-saturation.
- Check the influence of the minimal kinetic energy in the nHits and energy_sum distributions.

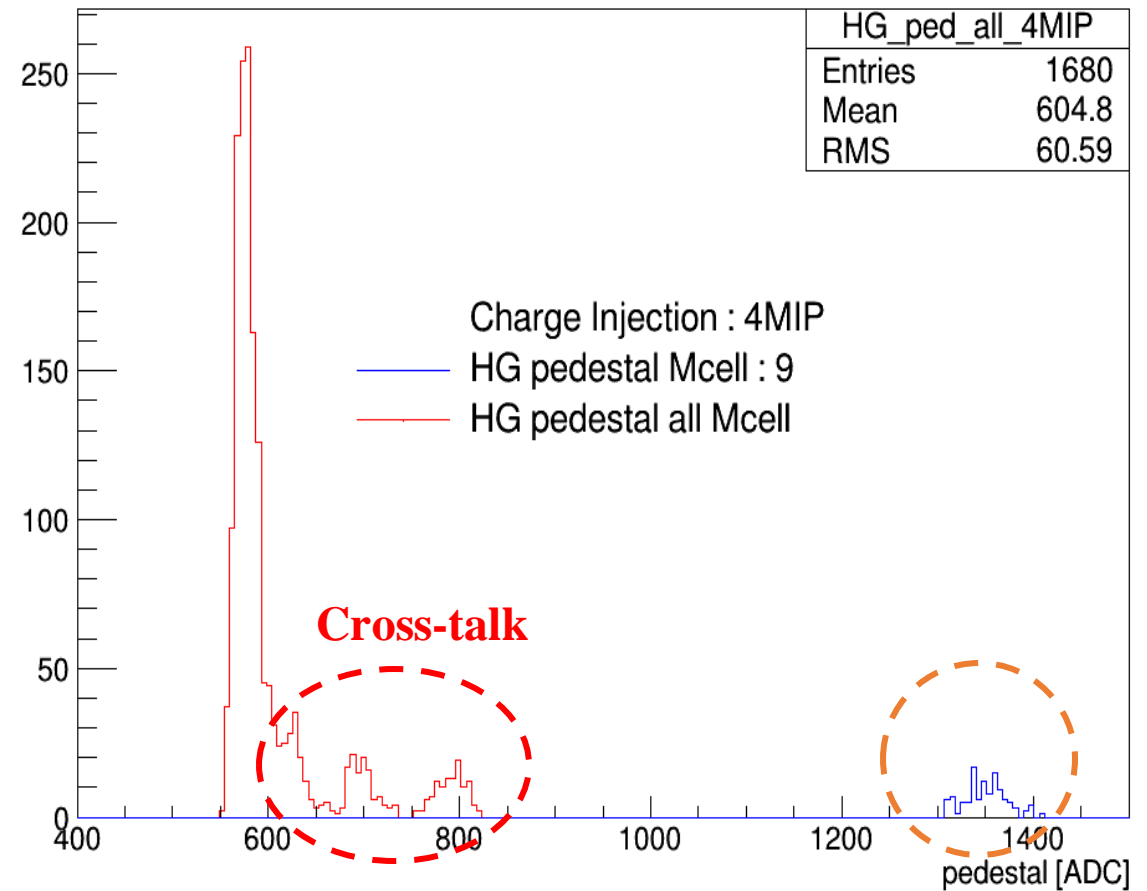
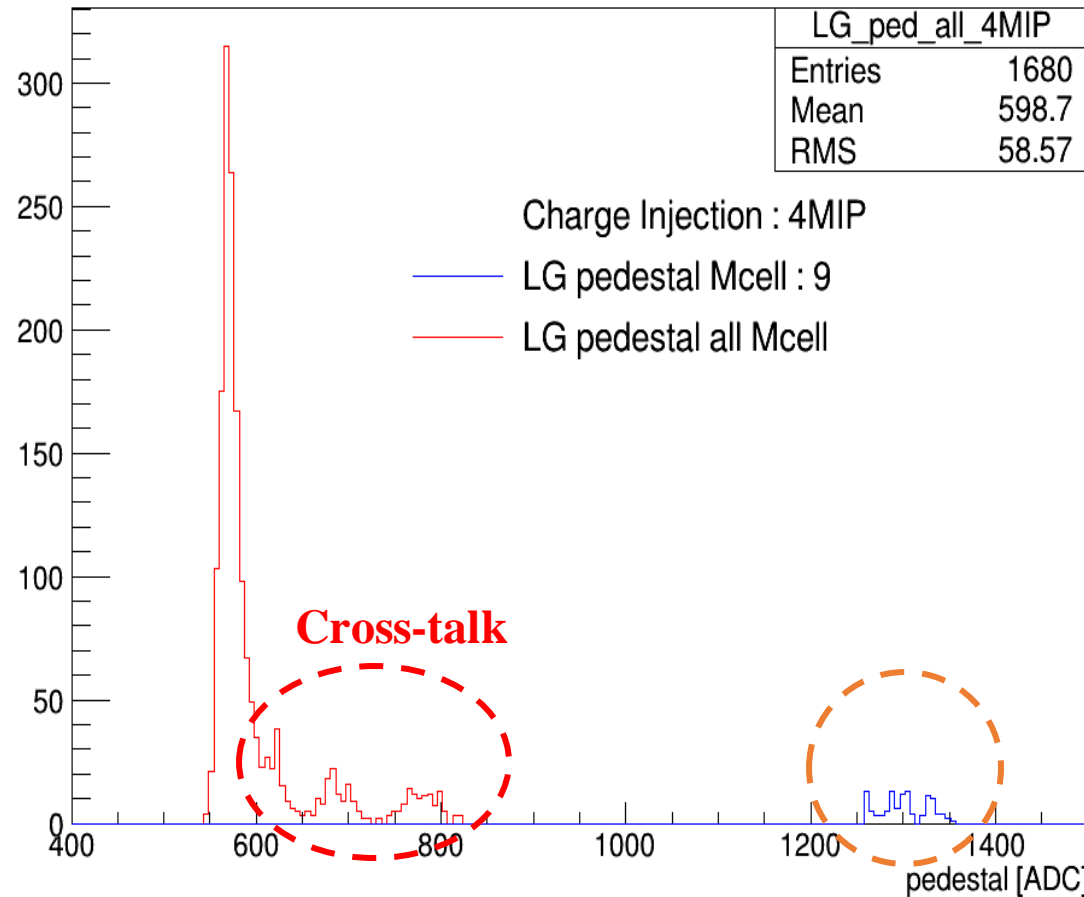
HG & LG pedestal and signal measurement with the test-board

HG and LG pedestal for mcell 9 and all the rest : **only the first 15 channels**



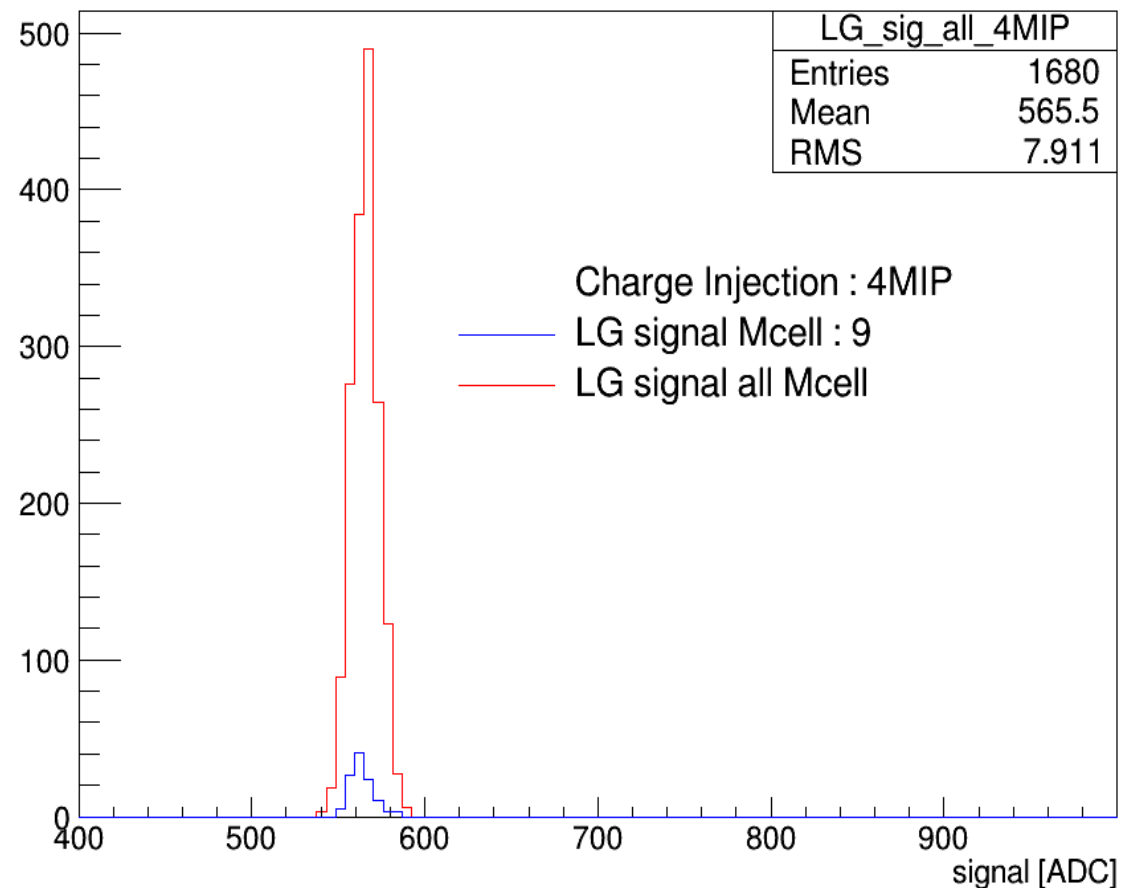
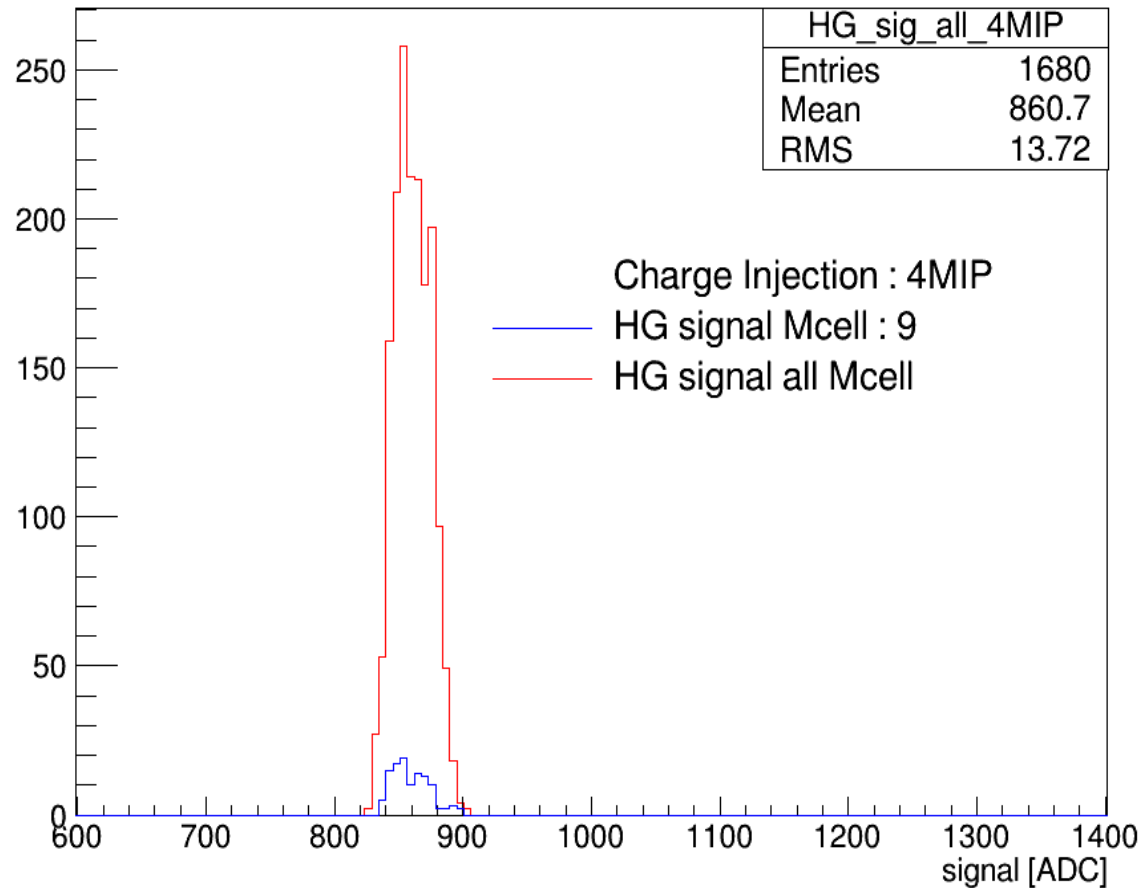
- **Jump of the pedestal in m. cell 9 for LG and HG modes.**

HG and LG pedestal for mcell 9 and all the rest : **only the first 15 channels**



- **Jump of the pedestal in m. cell 9 for LG and HG modes.**
- **Cross-talk contribution**

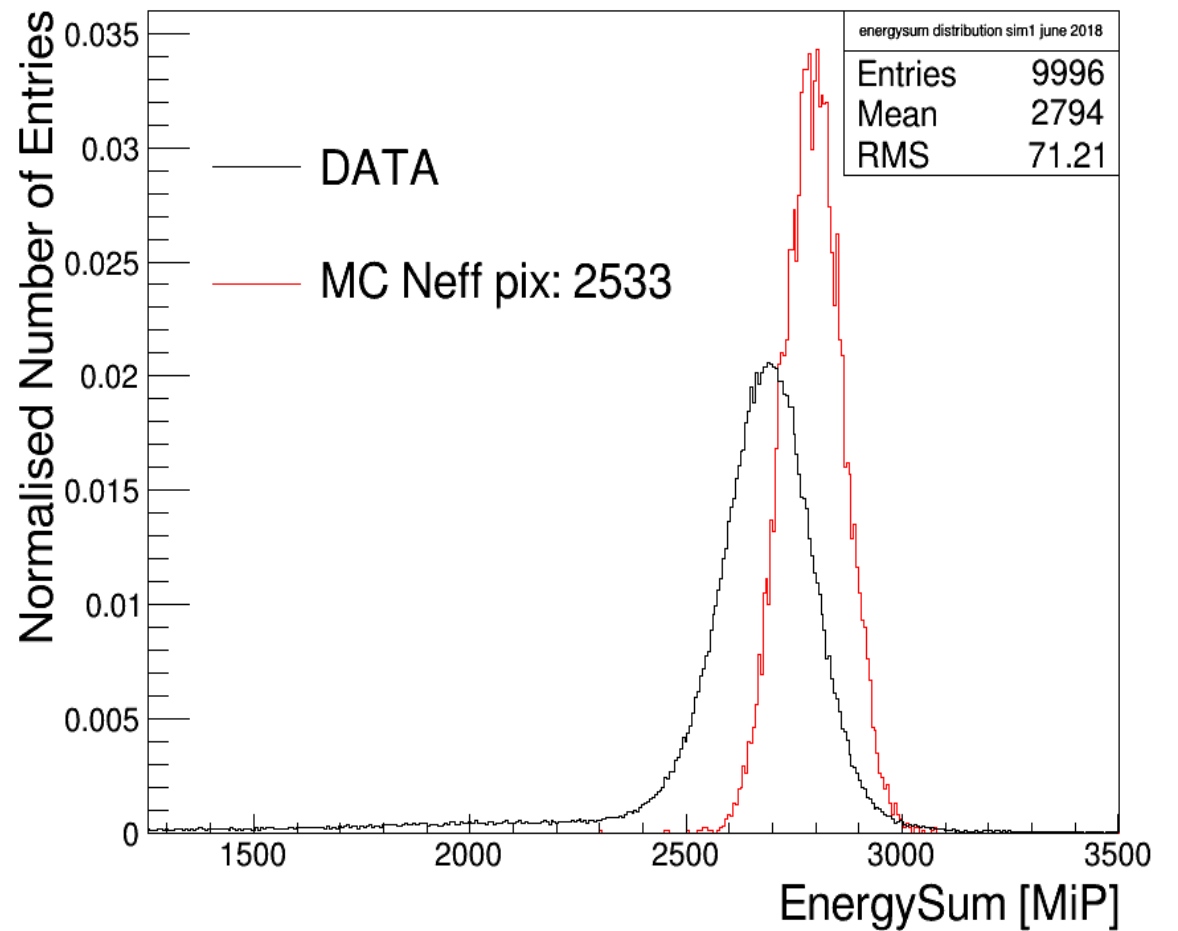
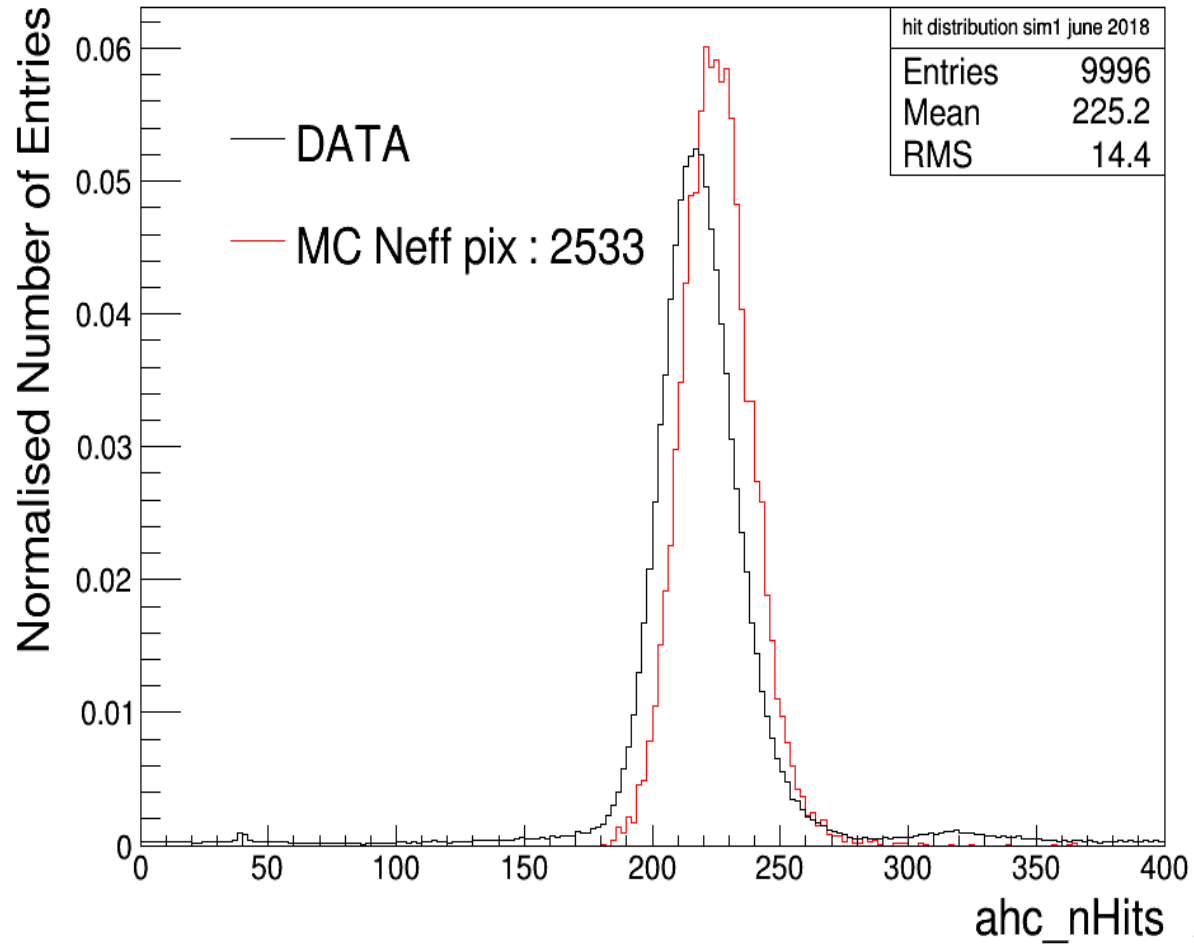
HG and LG signal for mcell 9 and all the rest : **only the first 15 channels**



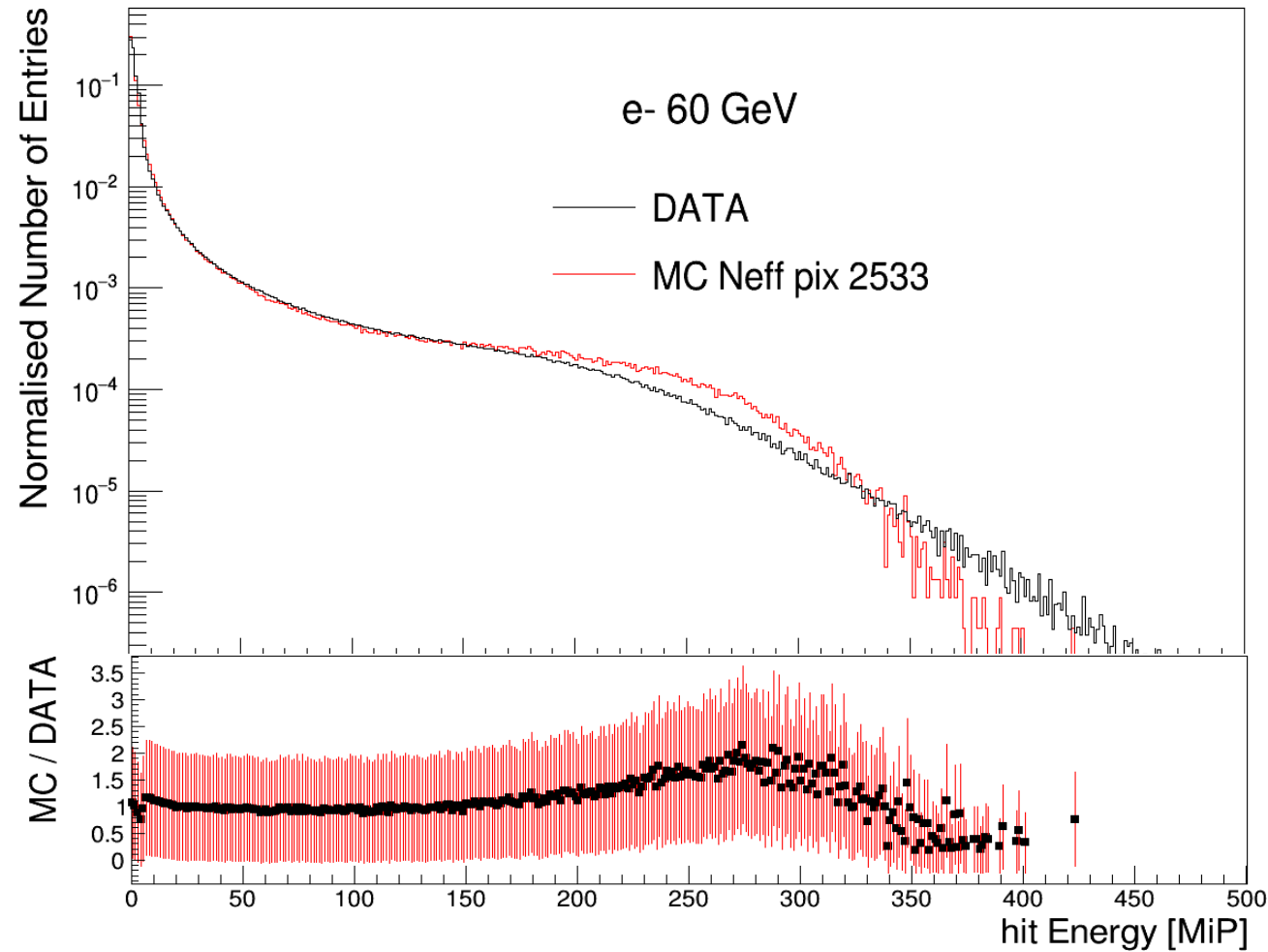
- **No jump of the signal in m. cell 9 for LG and HG modes.**

Data and simulation comparison for electrons data "June 2018"

Hits and energy_sum distribution for data and simulation : $e^- 60 \text{ GeV}$

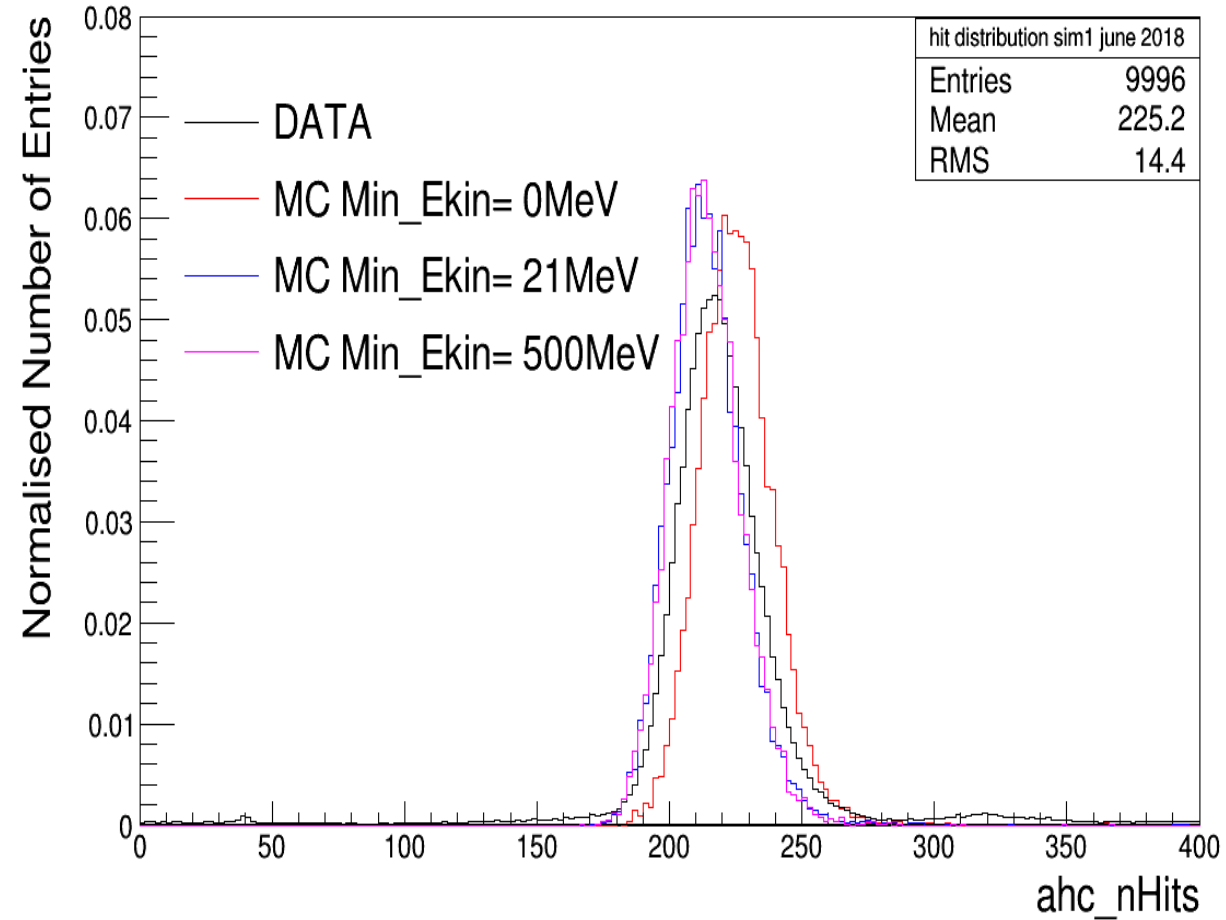
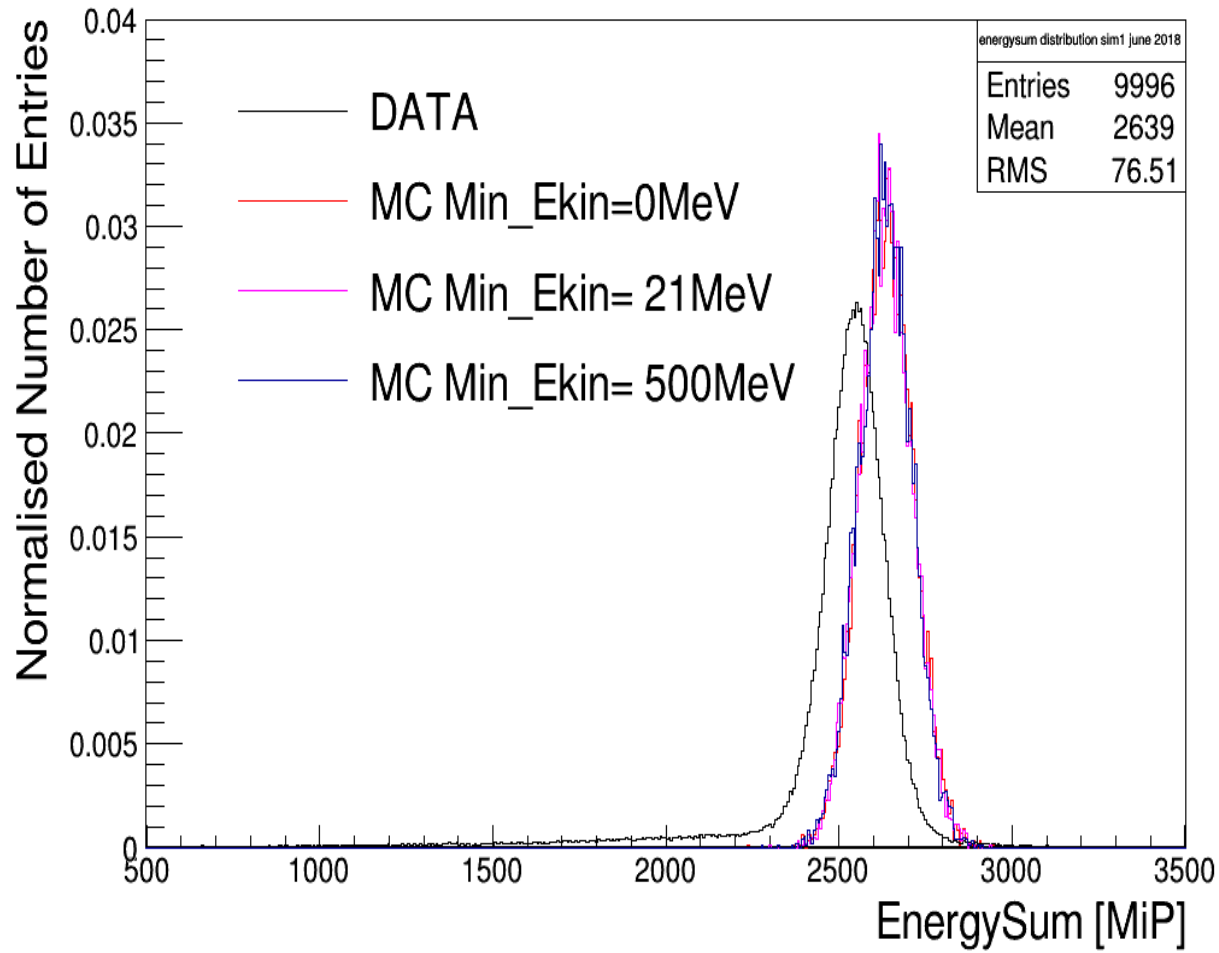


Hit_energy distribution for data and simulation : e- 60 GeV




- Couldn't check the hit energy with the de-saturation for different N.eff. Pixels because they is no data-base for different N. eff. pixels

Variation of the minimal kinimatic energy : e- 60 GeV



Next steps :

- The particleID processor implemented to my reconstruction. 
- Define the electrons selections cuts for different energy.
- Profile of the electromagnetic shower and comparison with simulation.