

T517 Niigata analysis of Solar CAL and individual readout

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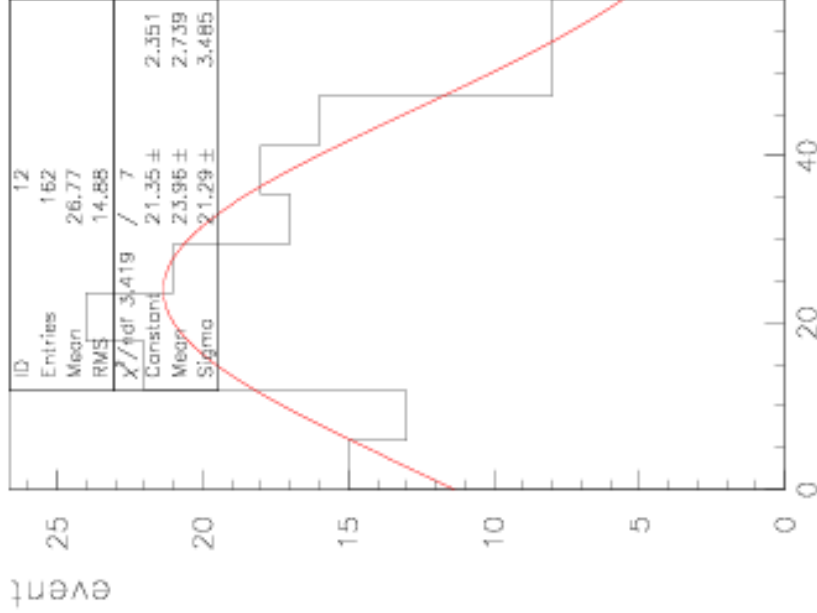
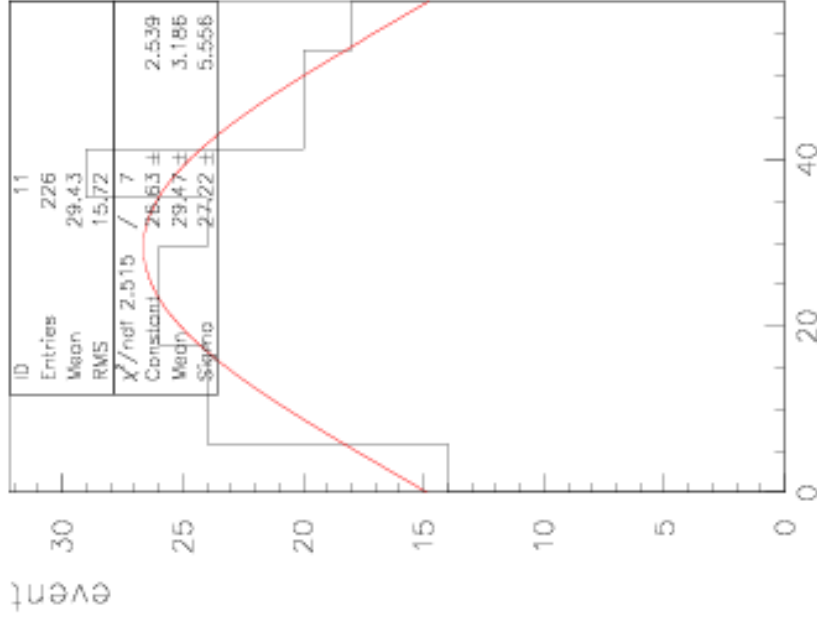
2. Anarysis of Solar cell CAL and BIO CAL

Solar cell data (run00486~495) : adcsol(8)

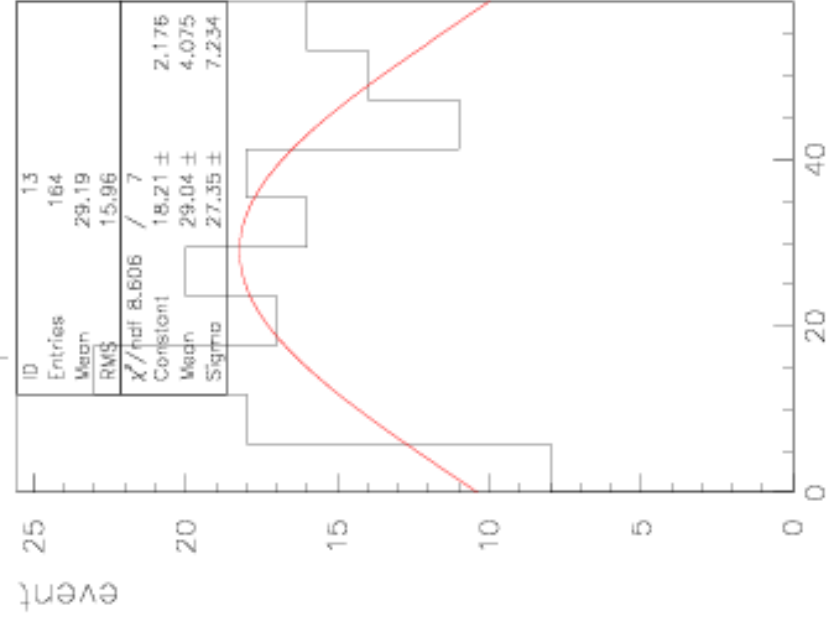
- Number of layers are only 5 (8mm lead + solar cell).
 - After checking, there is no output from 5th layer.
 - ⇒ We can use only 4 layer for anarysis.
 - We saw large noise by oscilloscope at beamtest
 - Data also very noisy(Pedestal is very wide and underflow)
 - We think we can not fit that shape of signal
 - Use mean value of static box
- ⇒ **Difficult to anarise these data.**

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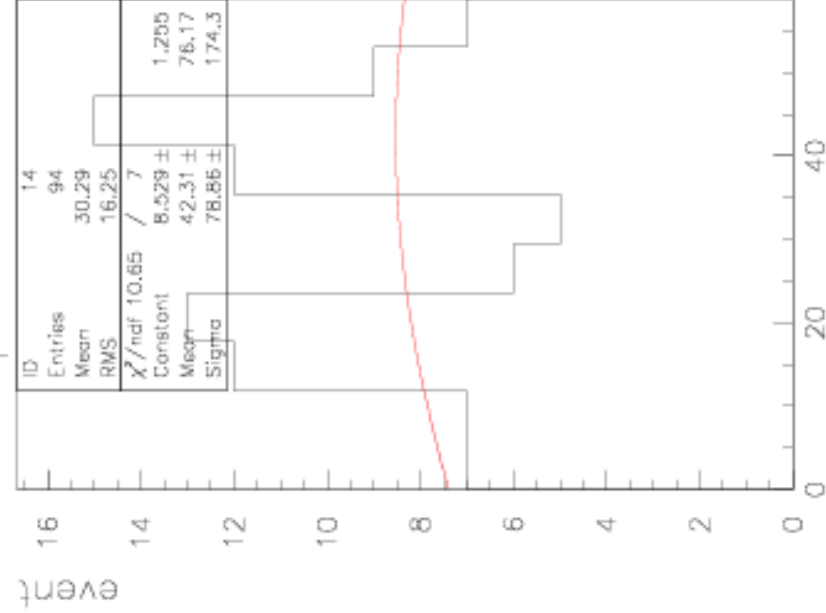
2GeV electron shower at Solar cell



pedestal

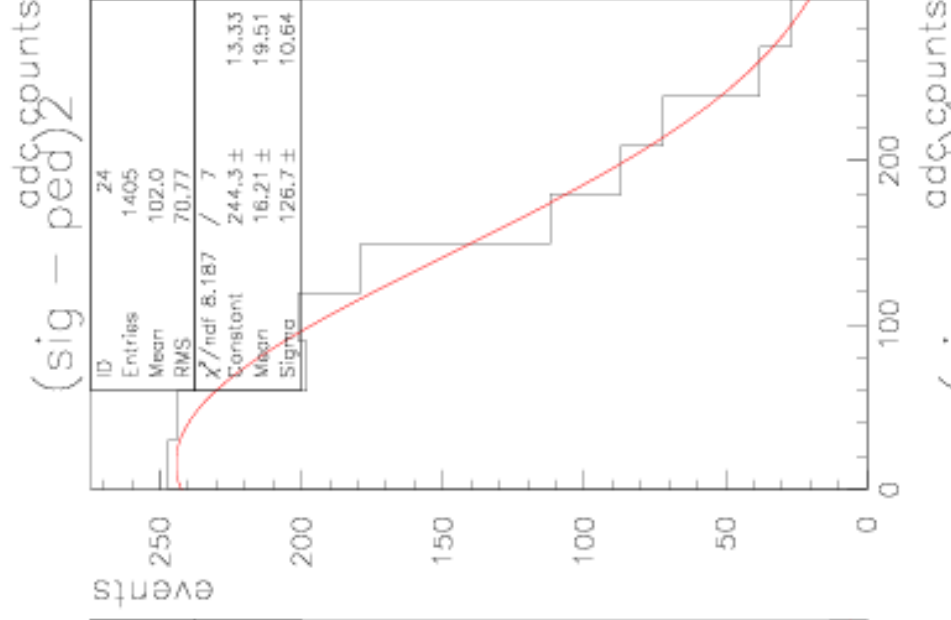
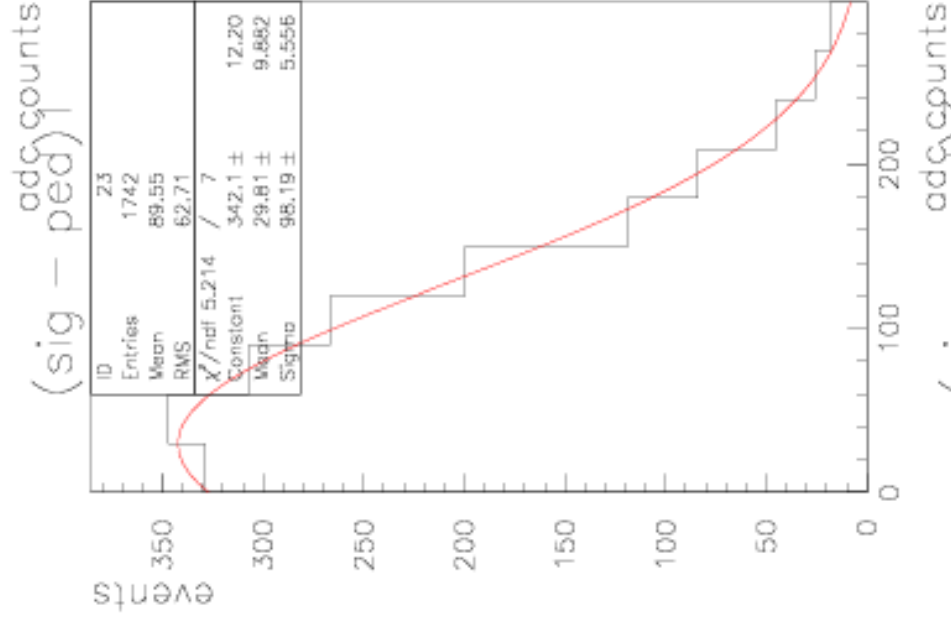
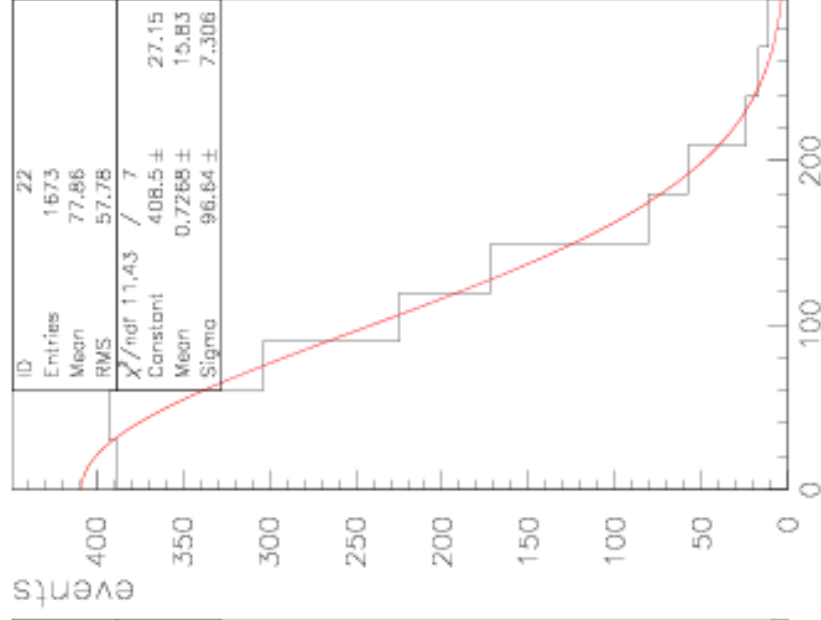
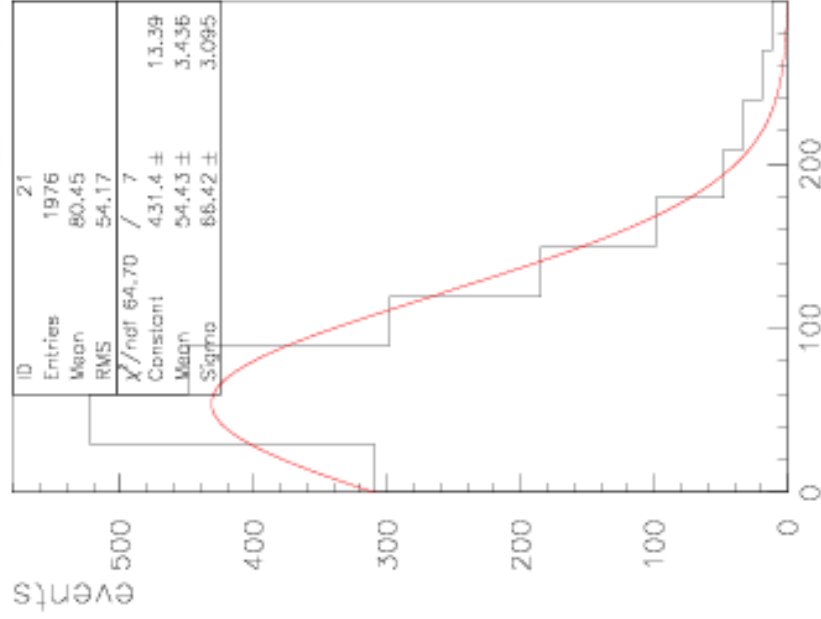


pedestal

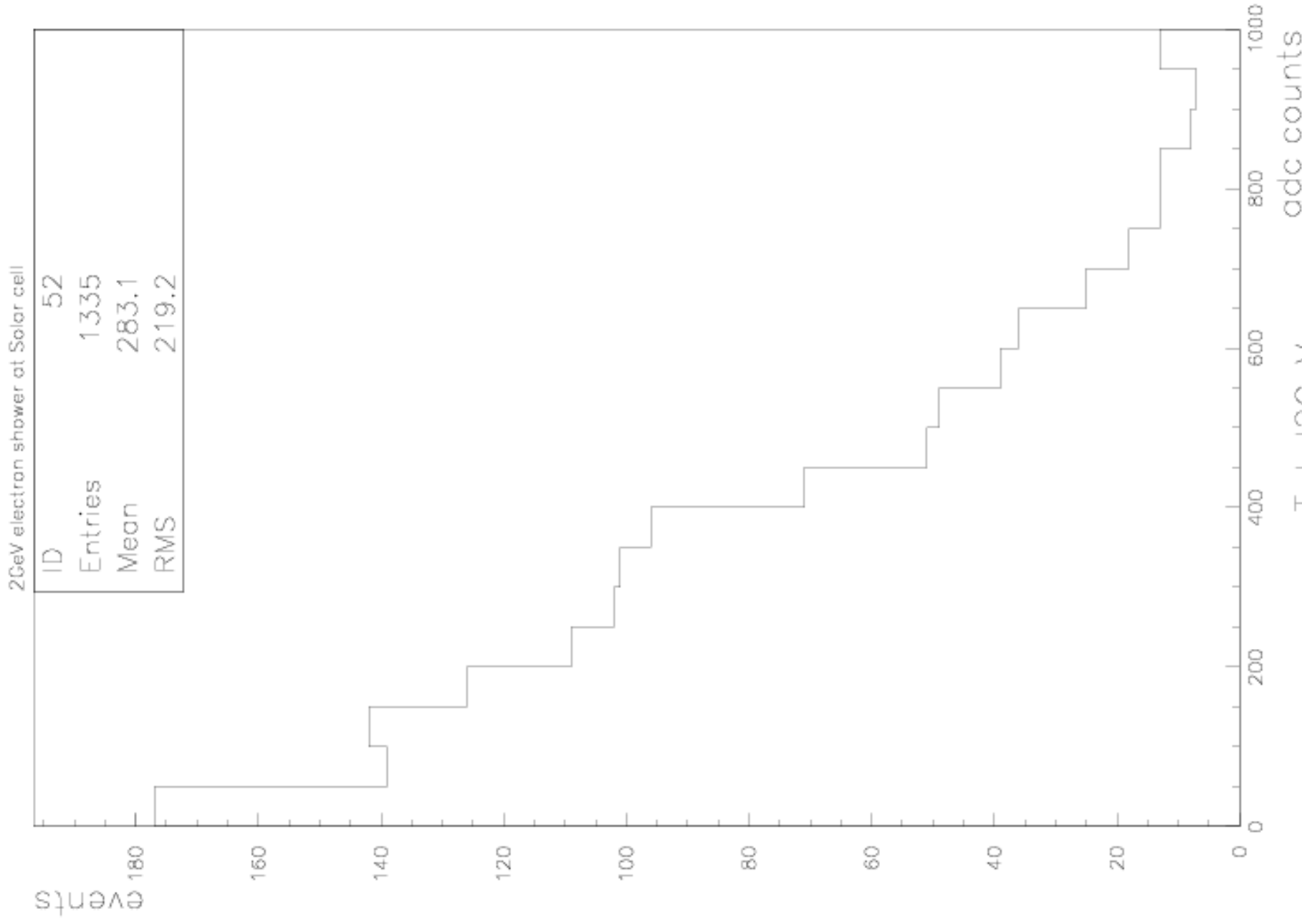


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2GeV electron shower at Solar cell

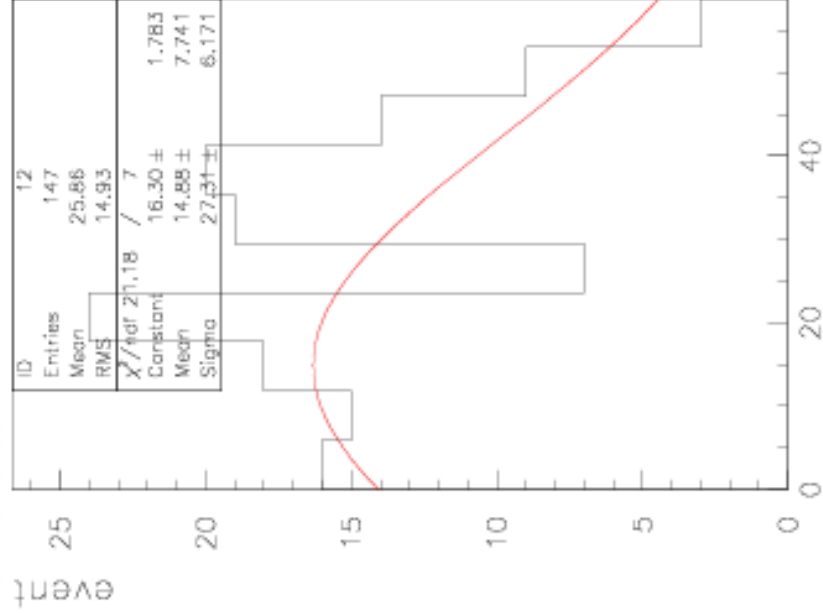
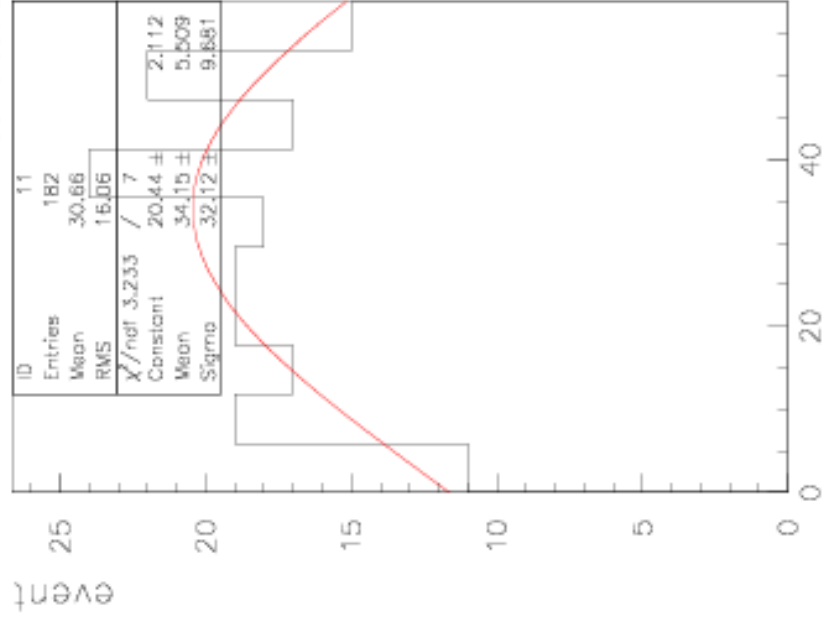


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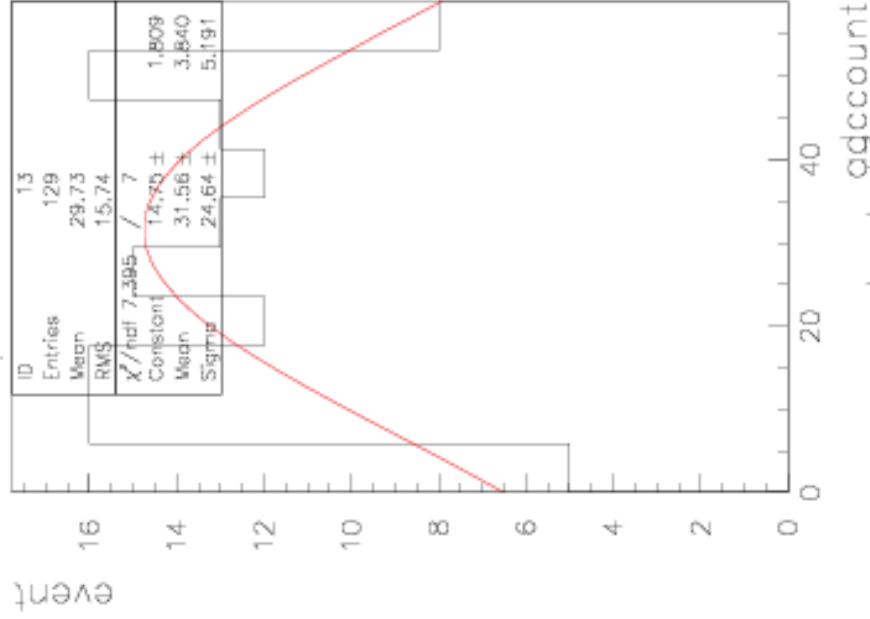


summary of the results

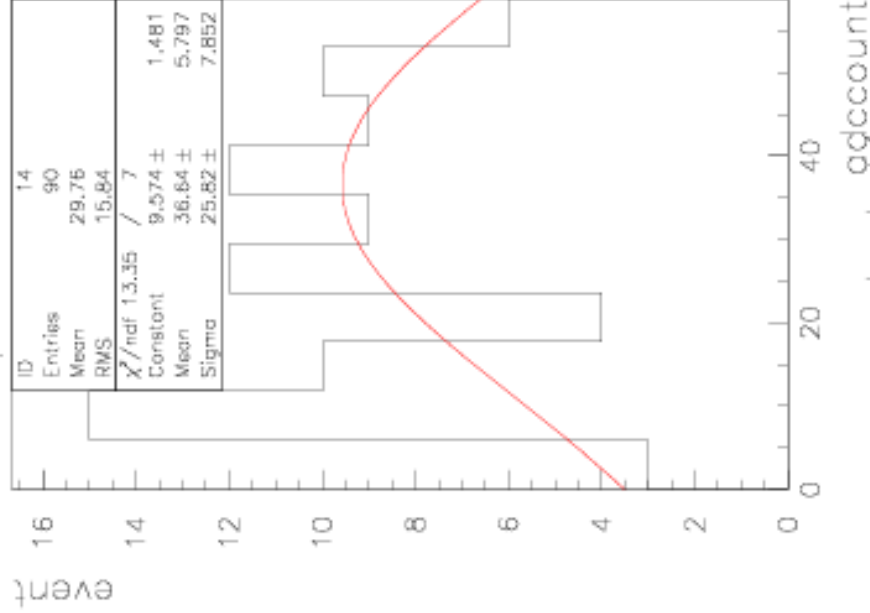
4CeV electron shower at Solar cell



pedestal

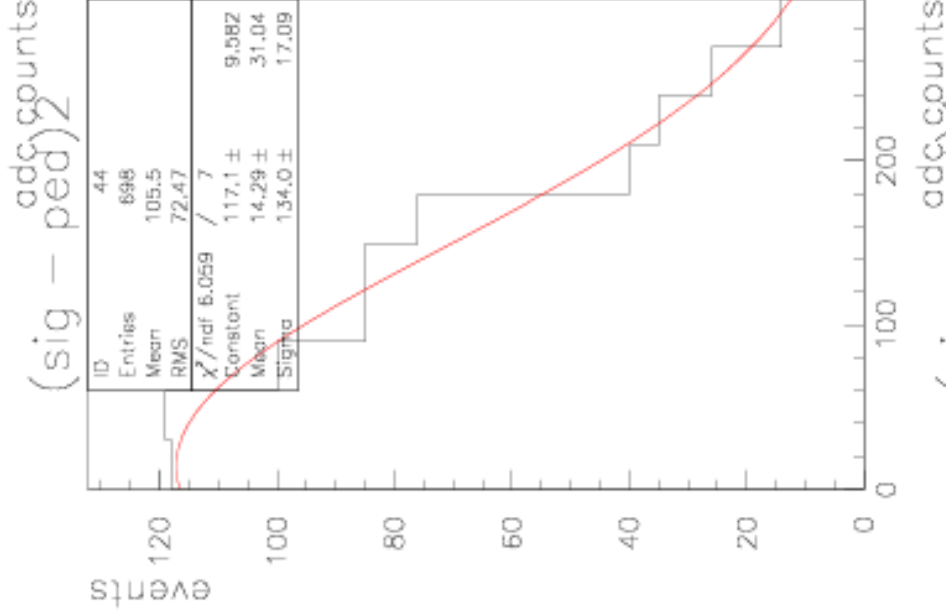
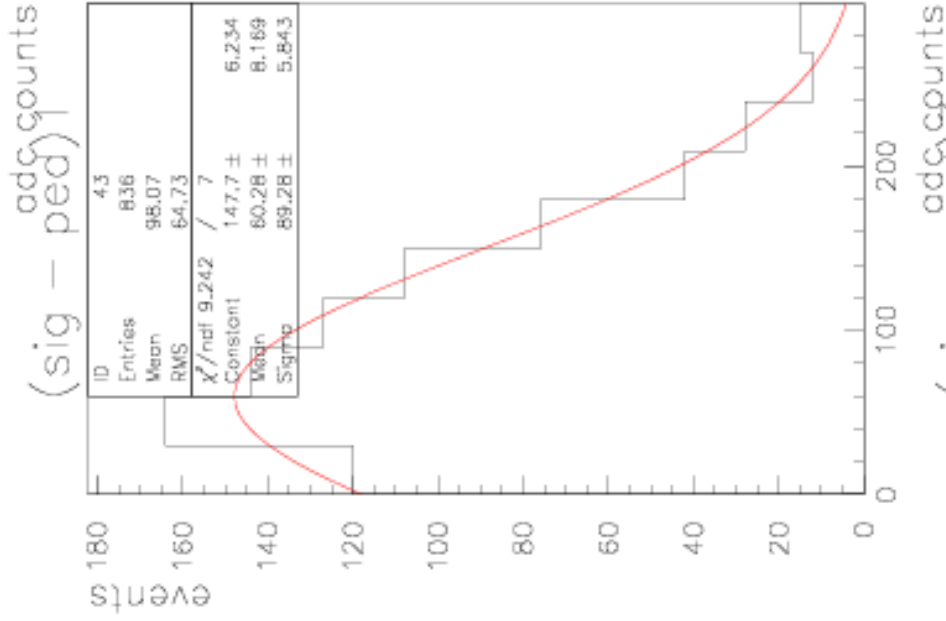
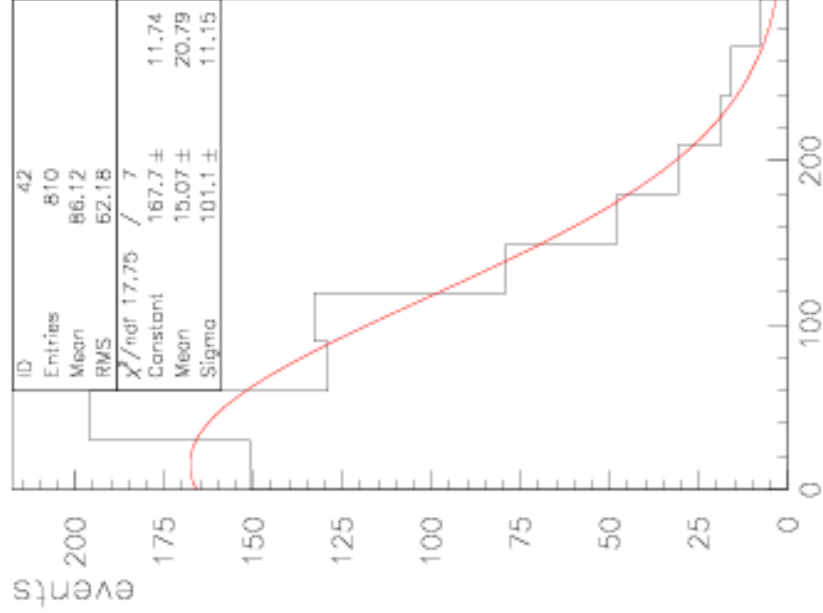
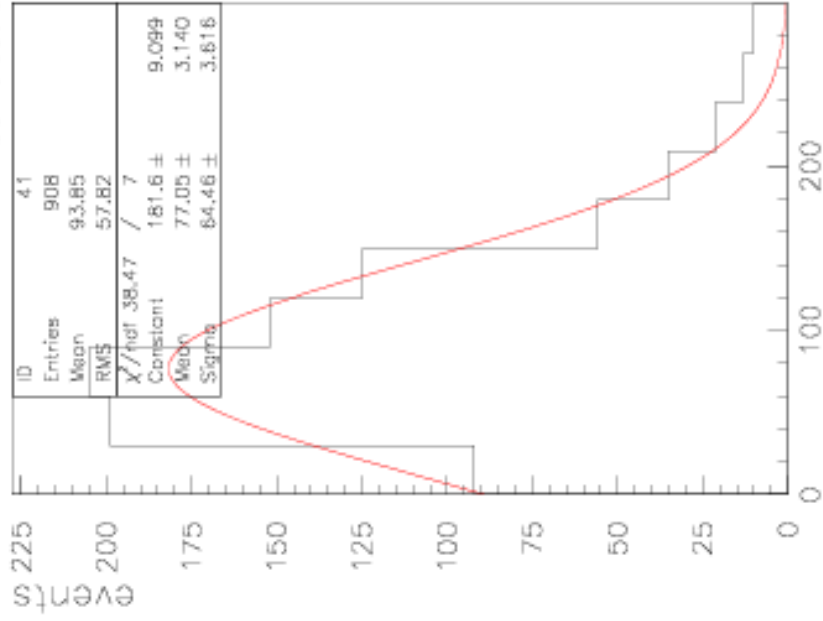


pedestal

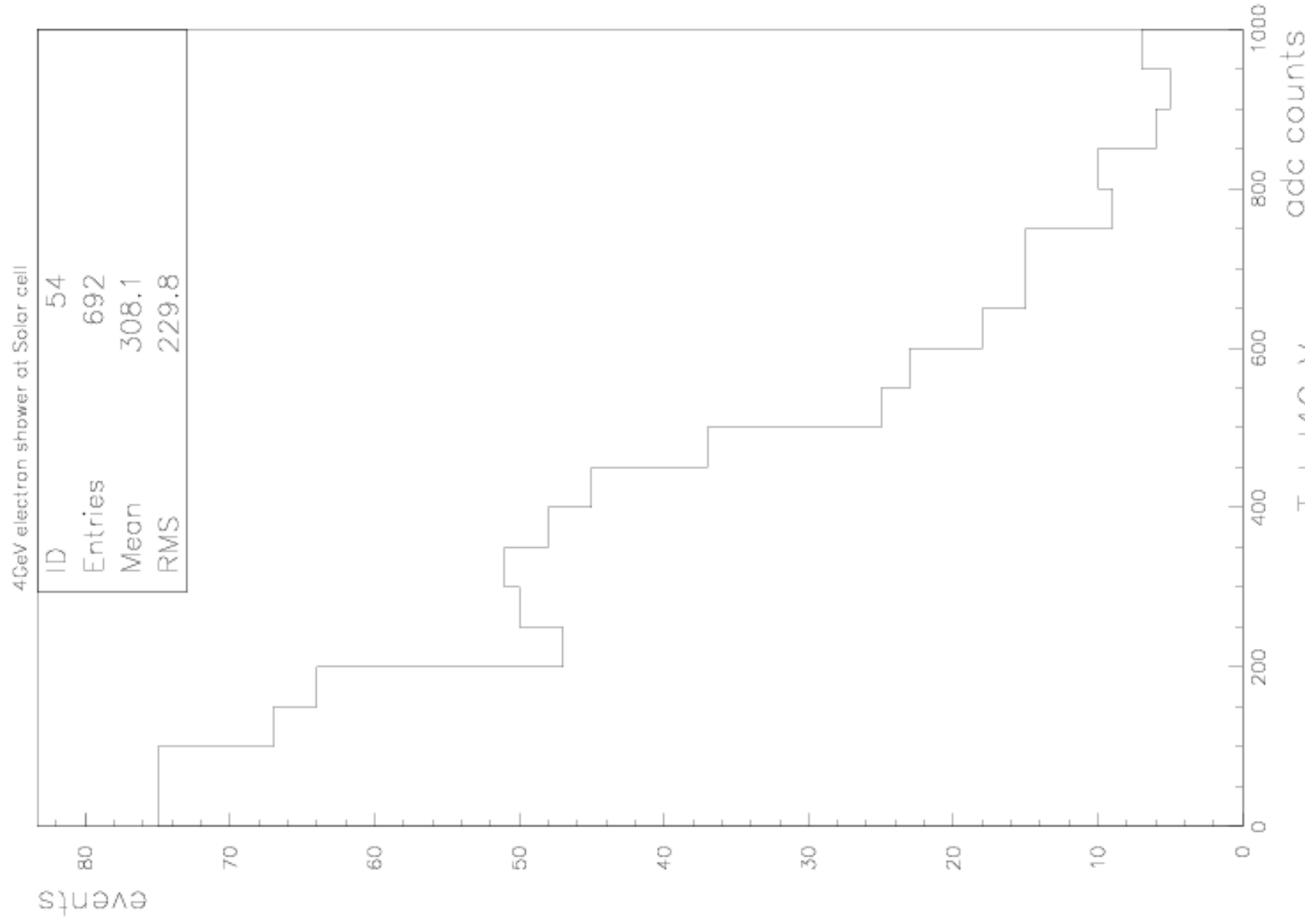


every day ...

4CeV electron shower at Solar cell

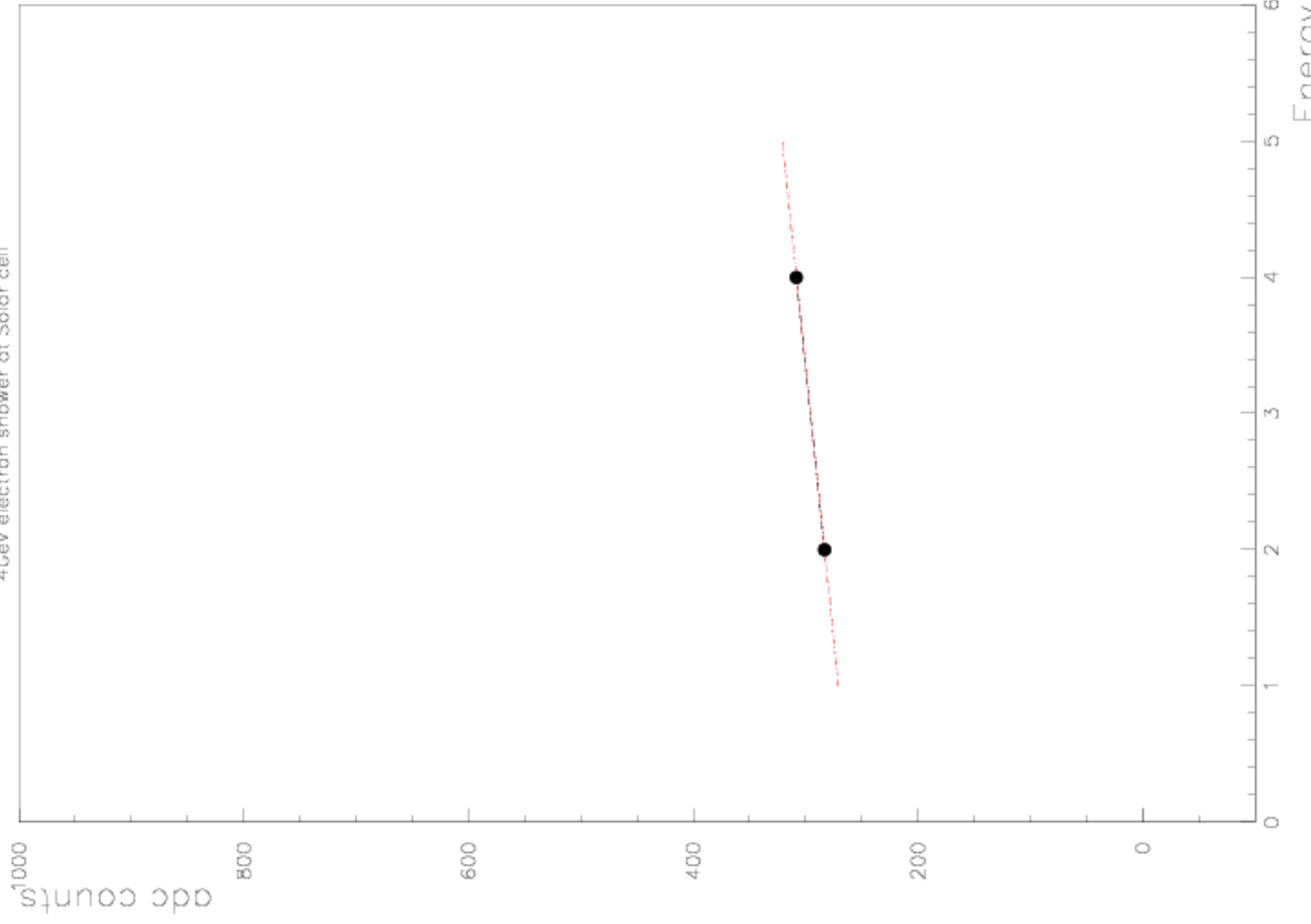


summary statistics



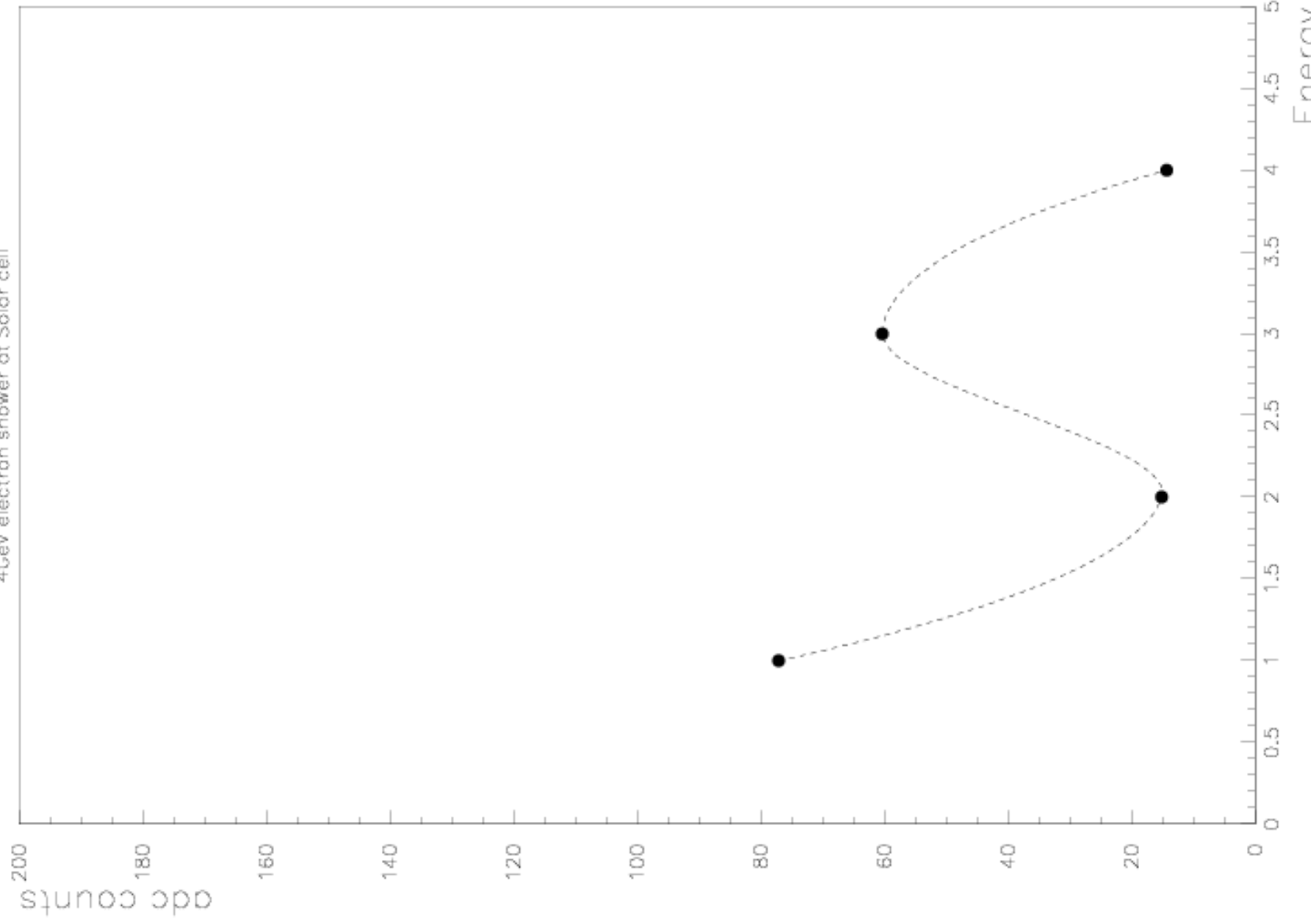
Energy [GeV] vs adc counts

4GeV electron shower at Solar cell



Energy vs adc counts

4CeV electron shower at Solar cell



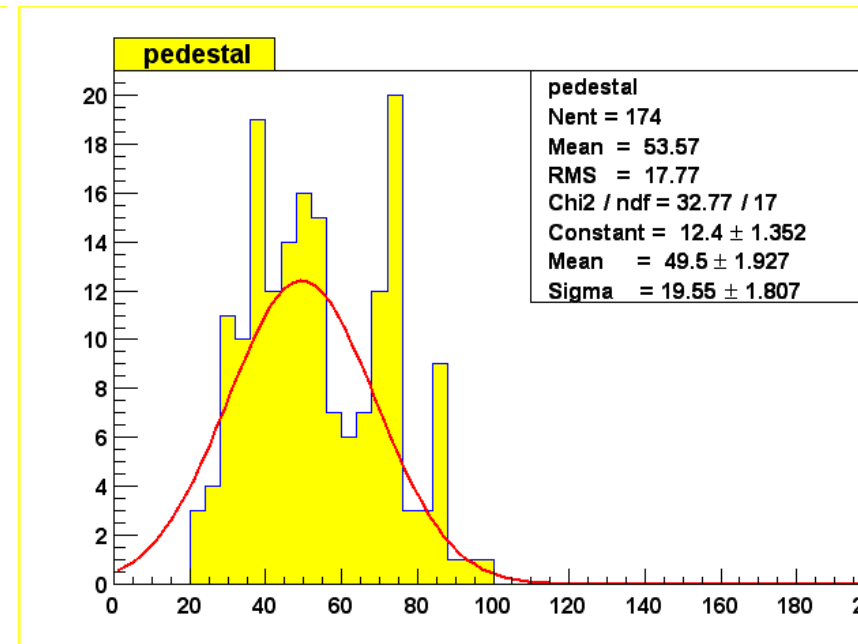
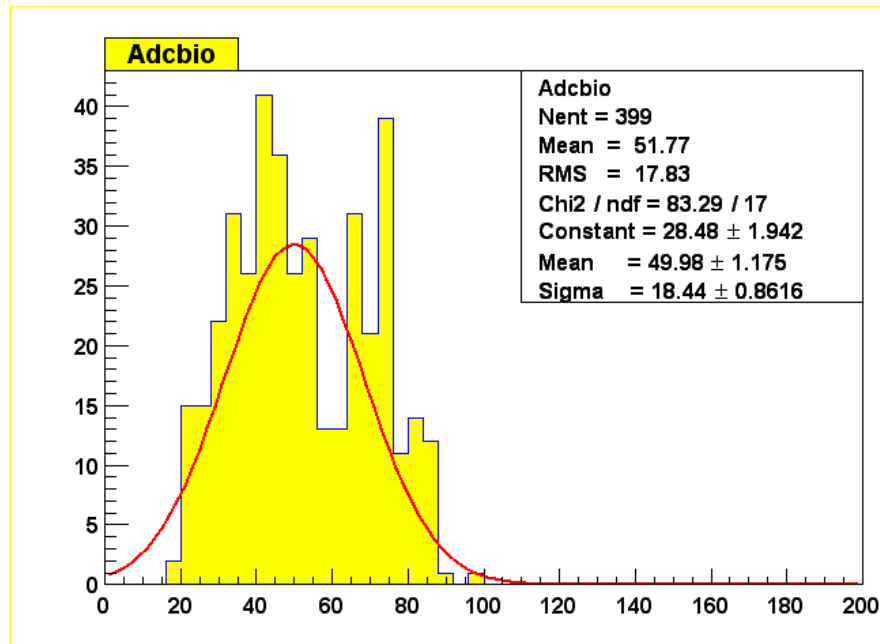
Solar cell bench test

From these signals, it is difficult to say see signal or not. Therefore now we will do bench test by parallel.

- We try to observe the β -ray signal from solar cell
→ We already saw solar cell signal from YAG laser
- Also very noisy and we did not see β -ray signal
→ Noise reduction and use smaller cell(5cm×5cm)

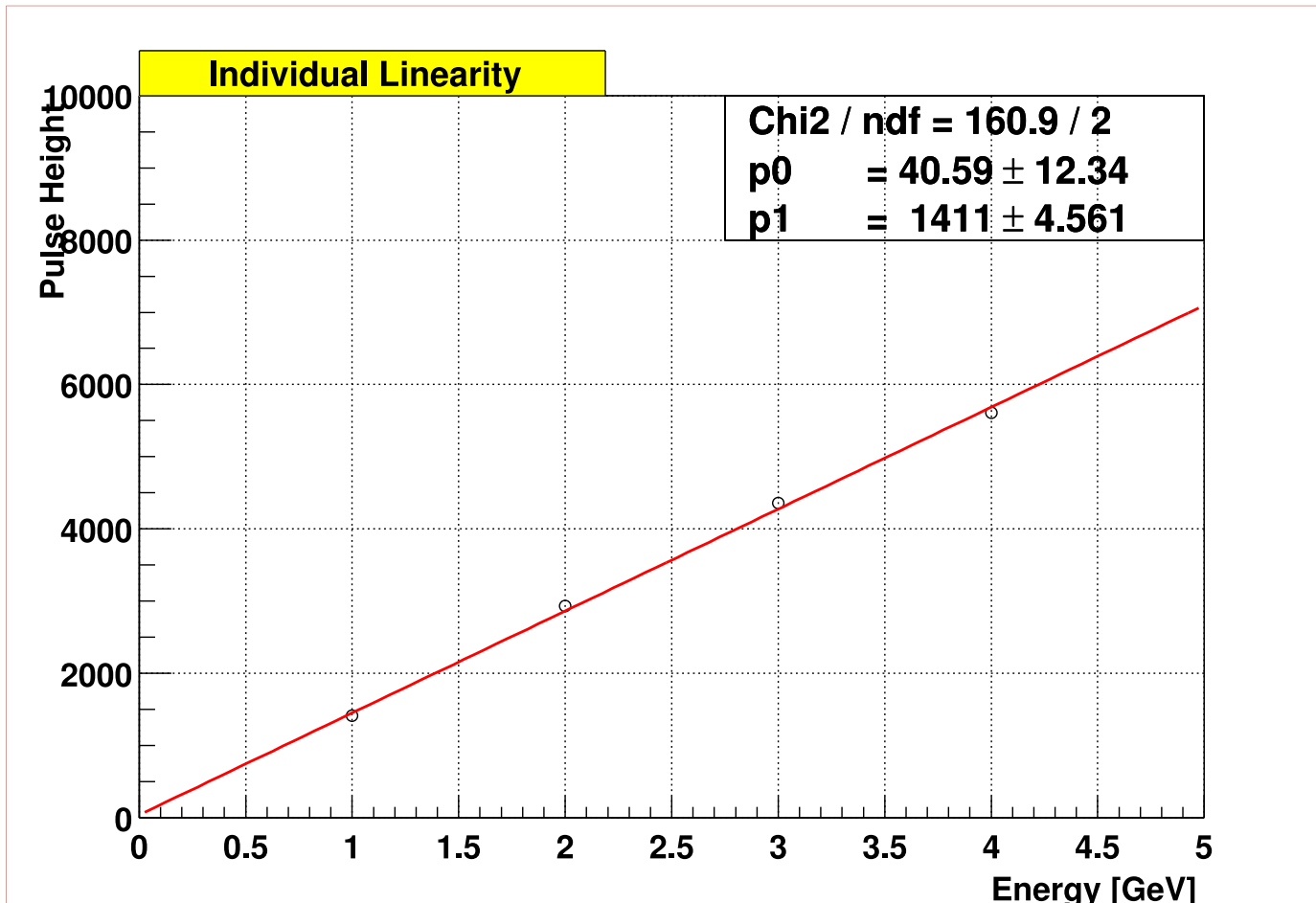
BIO data

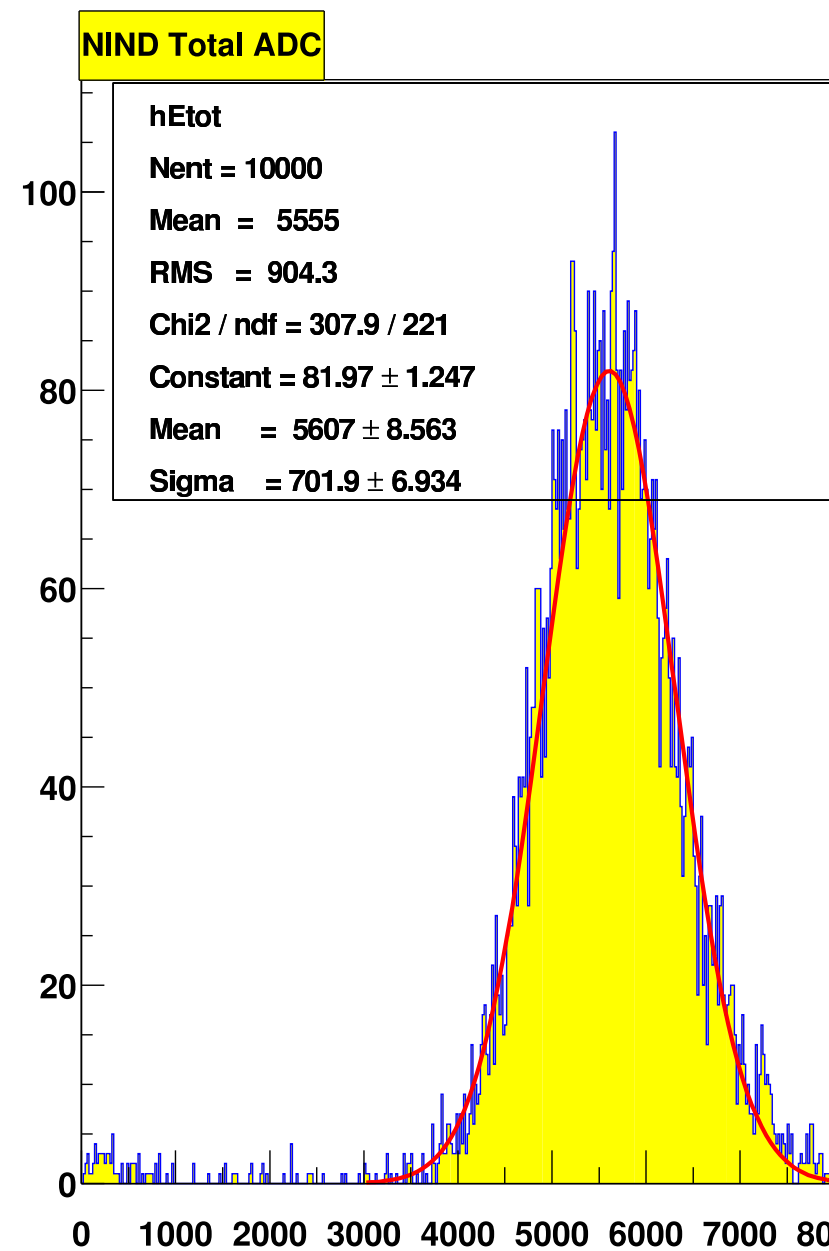
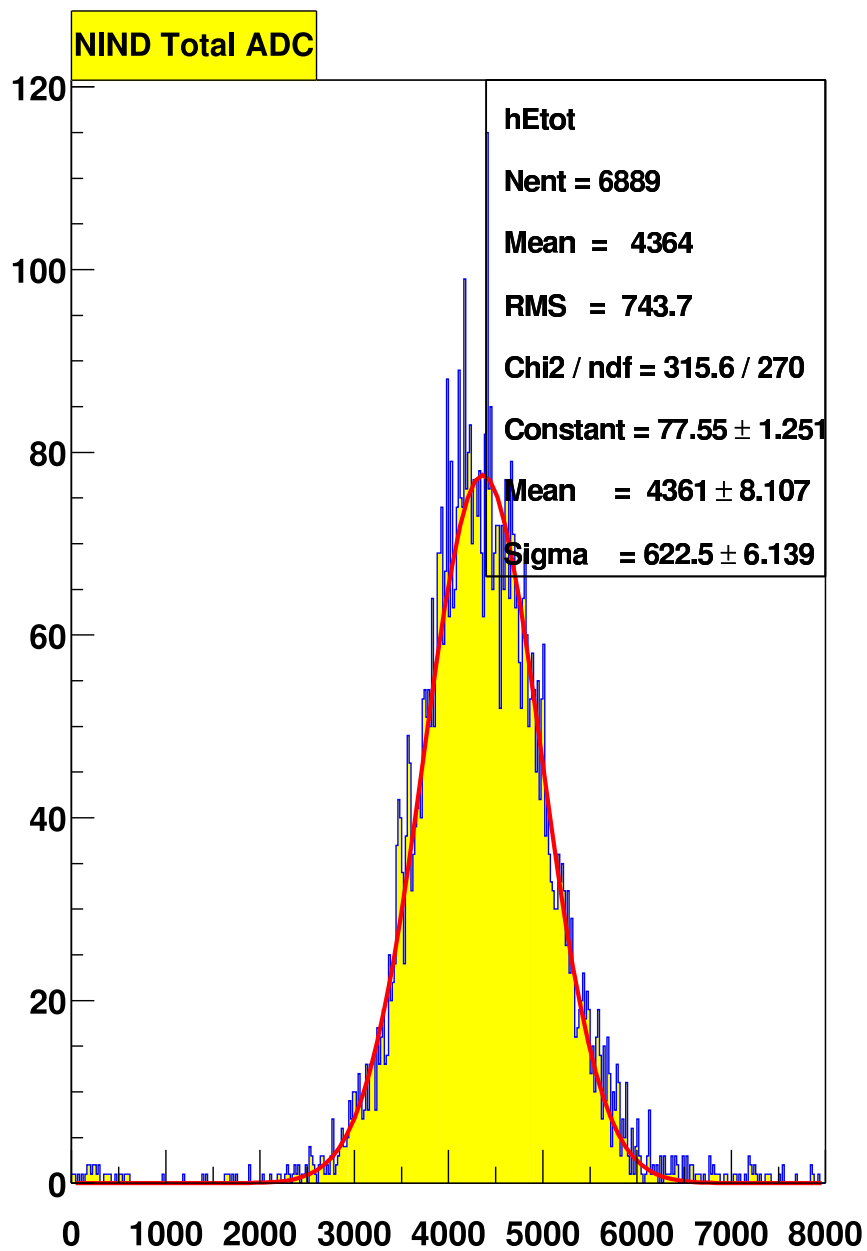
As a Reference, signal looks same as pedestal.



Analysis of Individual readout

Now just started, only get “Linearity” data.
But not yet calibrated.





Anarysis schedule

- Completely finished solar and BIO anarysis
→ Decide to see signal or not
- Do hardly Individual readout anarysis
- Do benchtest (solar & Tile/Fiber CAL)