

1st run with external trigger (11/2/09 - raw_data_pm.txt)

- external trigger
- coincidence PMT.AND.AmplSum
- Thr for sum =
- 80 mV Gp5 thr
- register blocking enabled
- 500000 evts run
- PMT integrated into DAQ / data file

Analysing data file..... data/raw_data_pm.dat

Histograms will be written in : ./output.root

You are using

- Number of channels =42
- Mapping file : map_lyso16_wls26.txt

channels that should not be connected

Reading mapping file: map_lyso16_wls26.txt

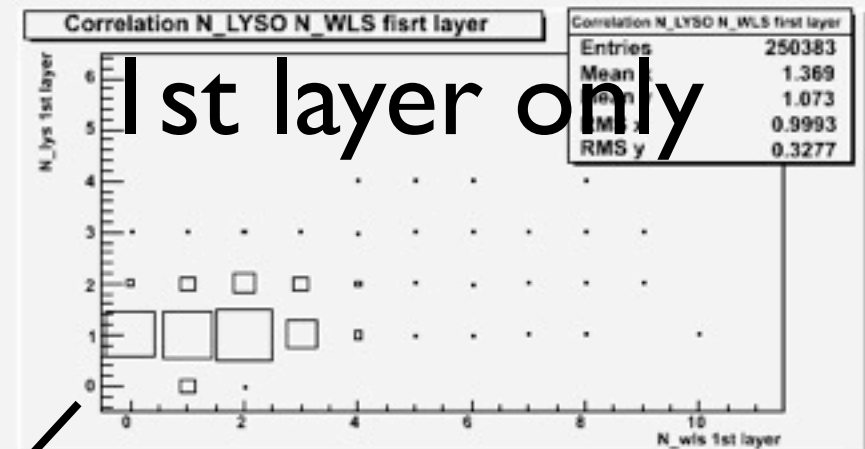
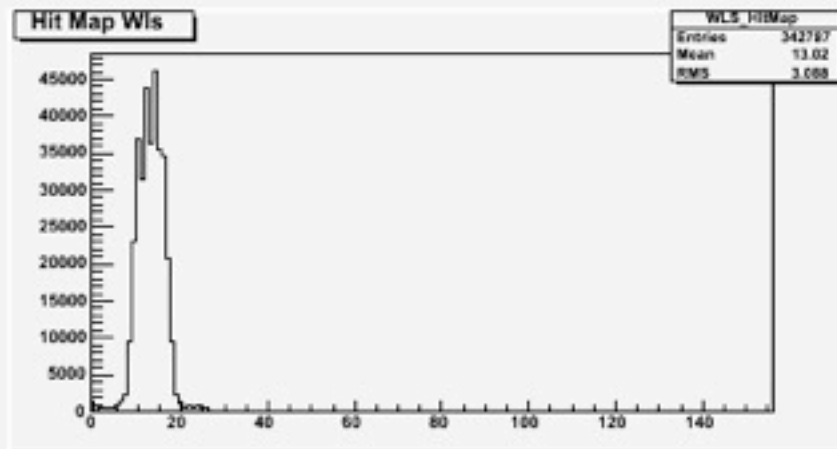
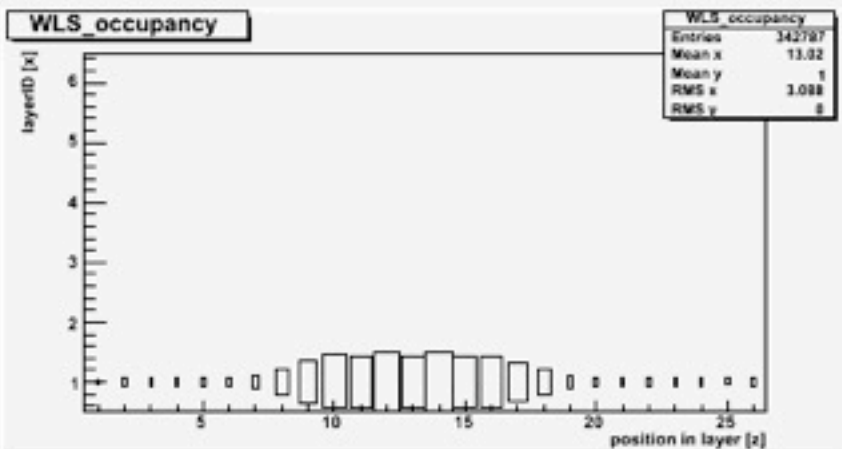
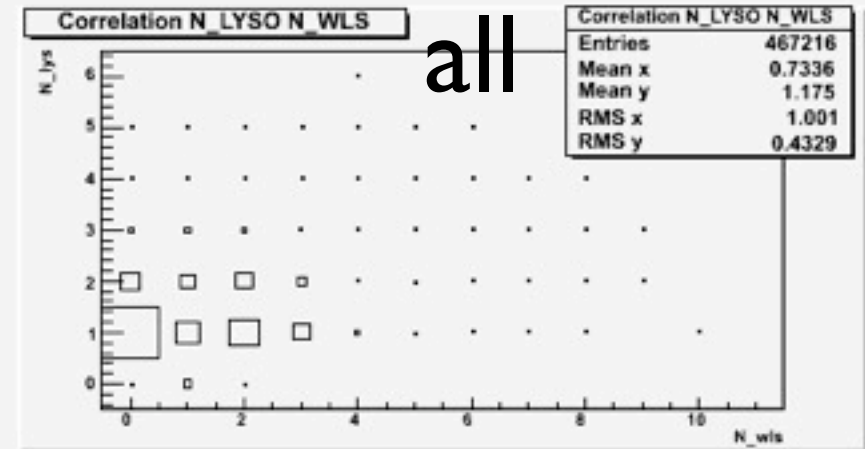
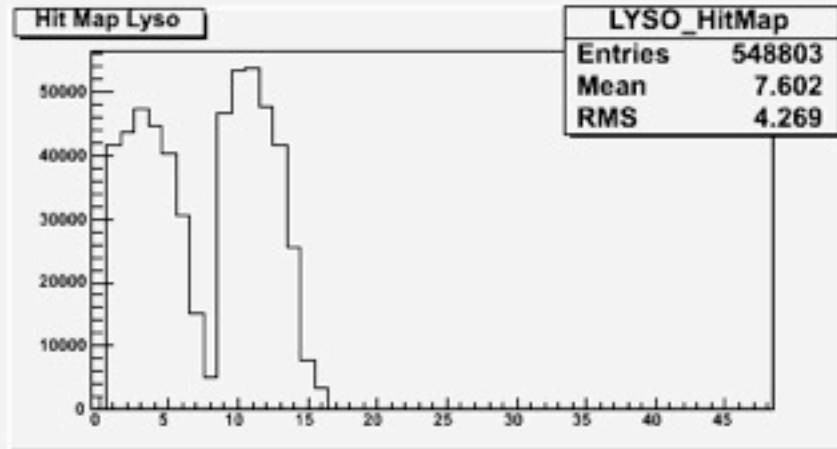
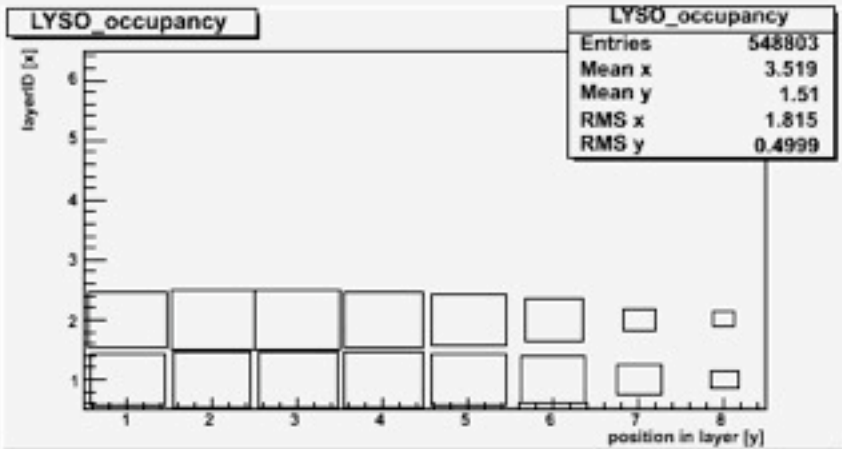
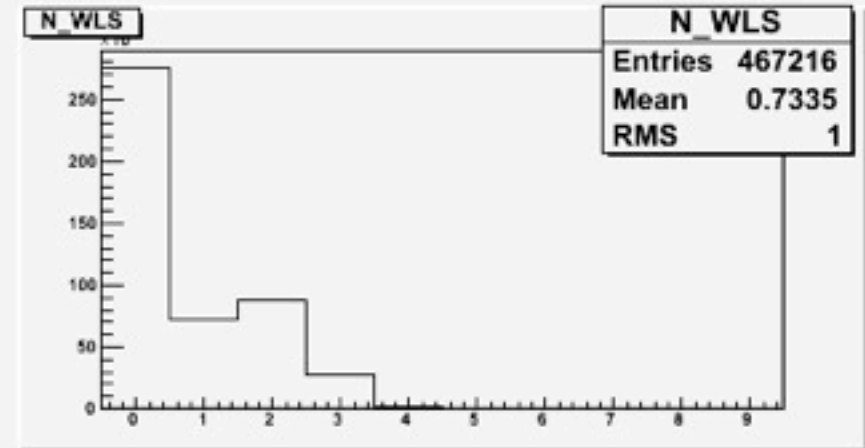
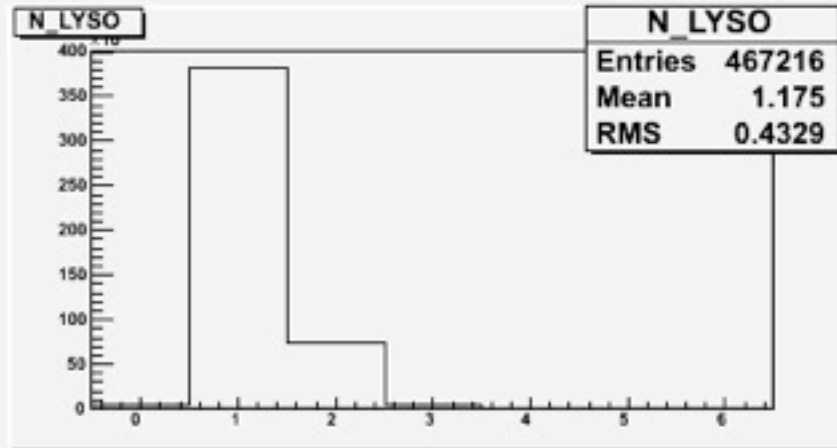
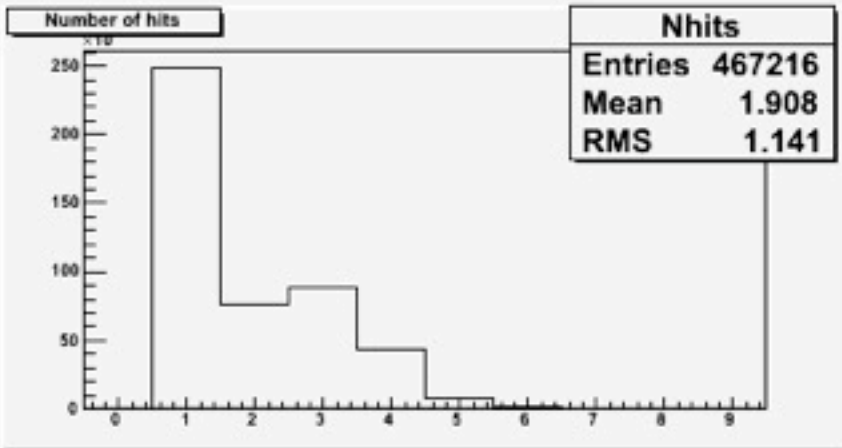
Number of events: 500000

WARNING--- Found channel 247 which does not exist in the mapping (Evt 27747)
WARNING--- Found channel 253 which does not exist in the mapping (Evt 27747)
WARNING--- Found channel 255 which does not exist in the mapping (Evt 95313)
WARNING--- Found channel 243 which does not exist in the mapping (Evt 116115)
WARNING--- Found channel 253 which does not exist in the mapping (Evt 126439)
WARNING--- Found channel 255 which does not exist in the mapping (Evt 126439)
WARNING--- Found channel 245 which does not exist in the mapping (Evt 135693)
WARNING--- Found channel 255 which does not exist in the mapping (Evt 182129)
WARNING--- Found channel 255 which does not exist in the mapping (Evt 263073)
WARNING--- Found channel 255 which does not exist in the mapping (Evt 310492)
WARNING--- Found channel 243 which does not exist in the mapping (Evt 461969)
WARNING--- Found channel 249 which does not exist in the mapping (Evt 479834)
WARNING--- Found channel 247 which does not exist in the mapping (Evt 479834)

Nr. of read events 500000

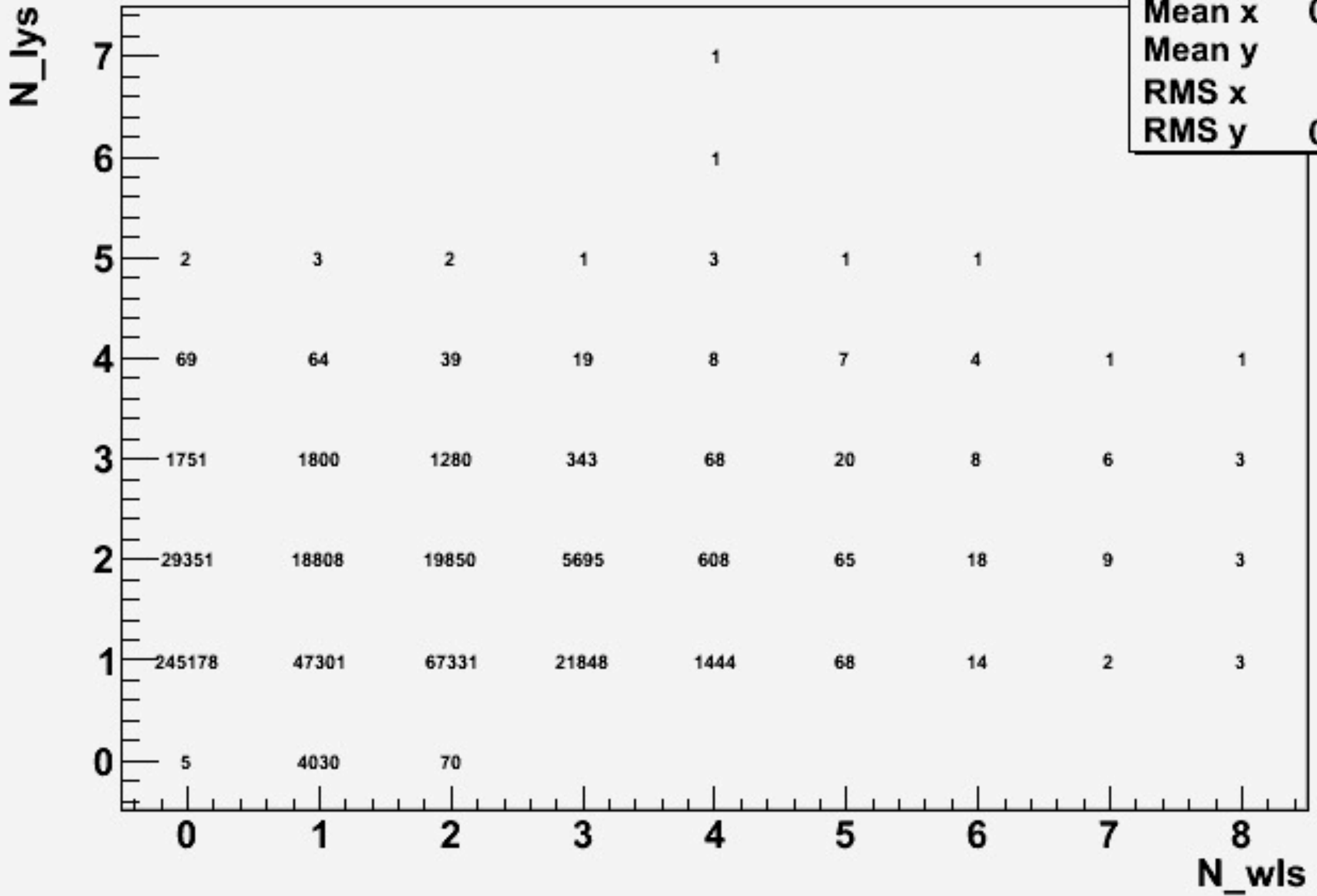
Nr. of empty events 32784 (0.065568)

6.6% of events is empty (wc= -6)
rejected for the analysis



$N_{lyso} = 0 ; N_{wls.ne.0} \sim 1.8\%$

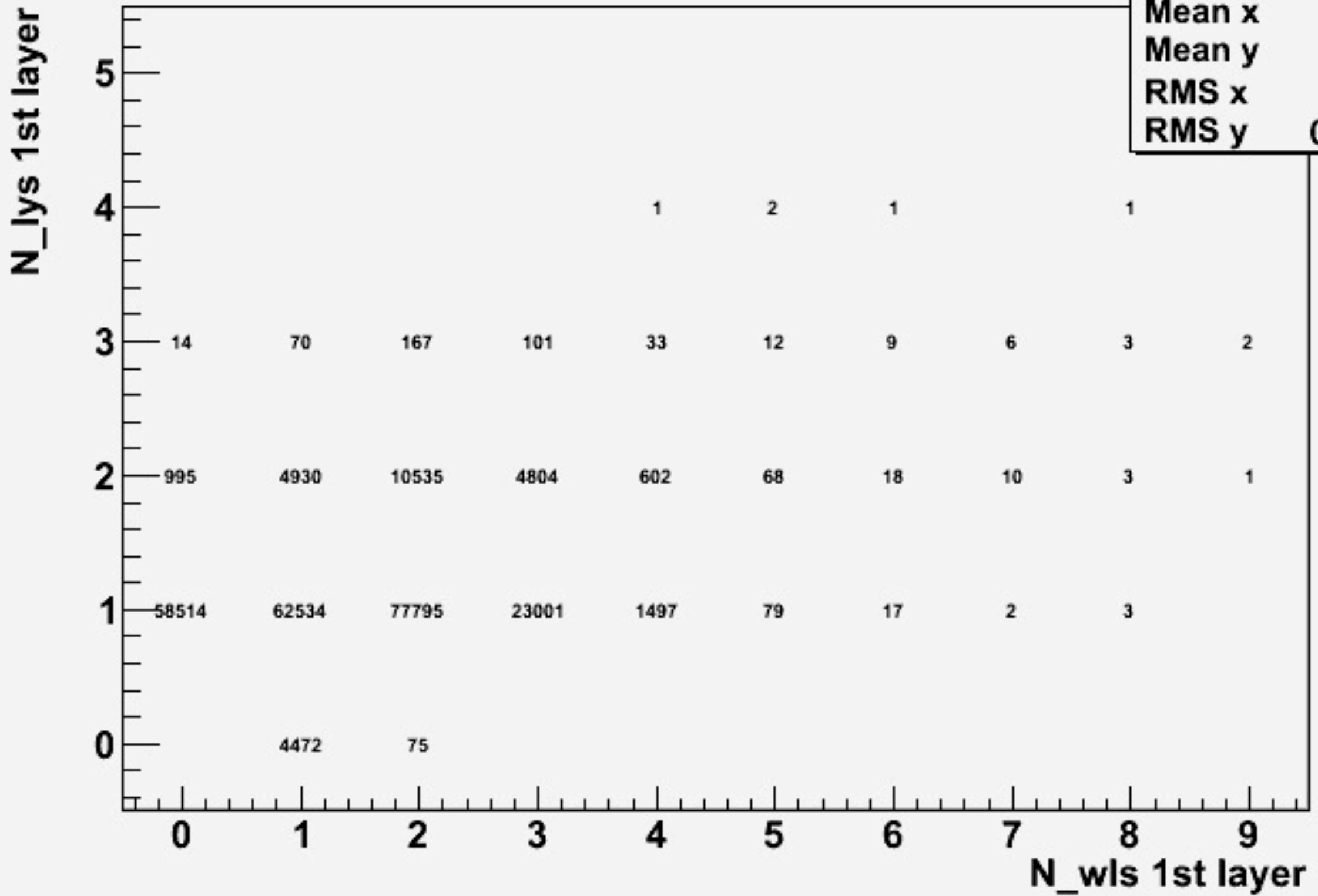
Correlation N_LYSO N_WLS



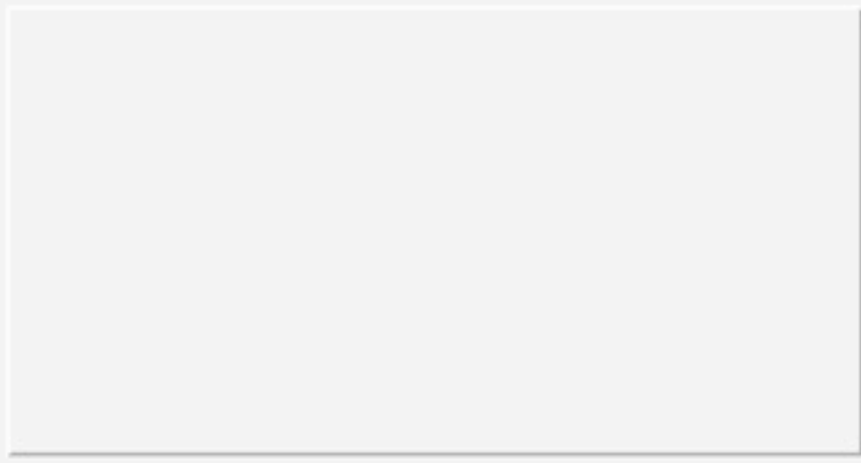
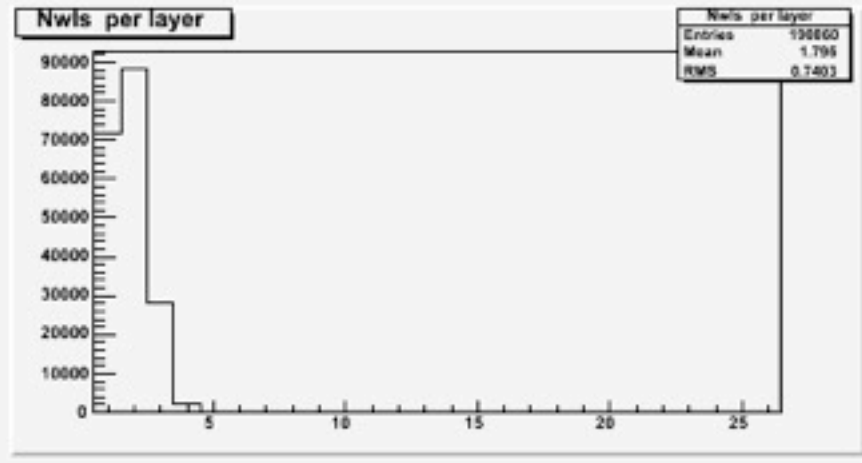
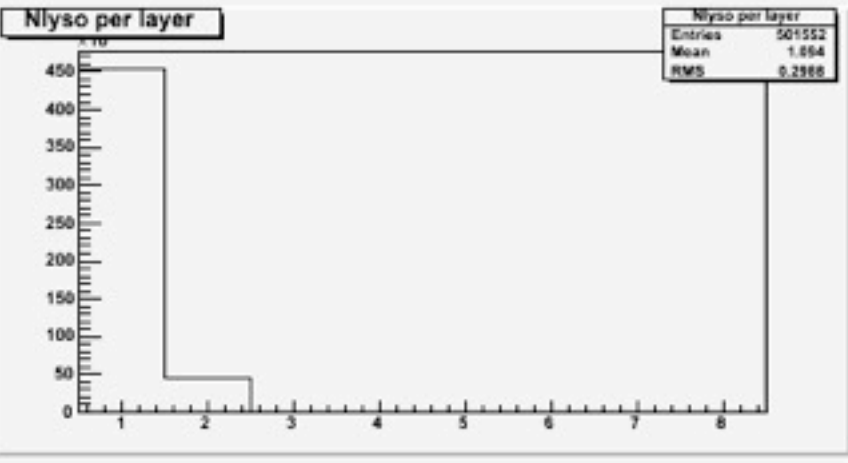
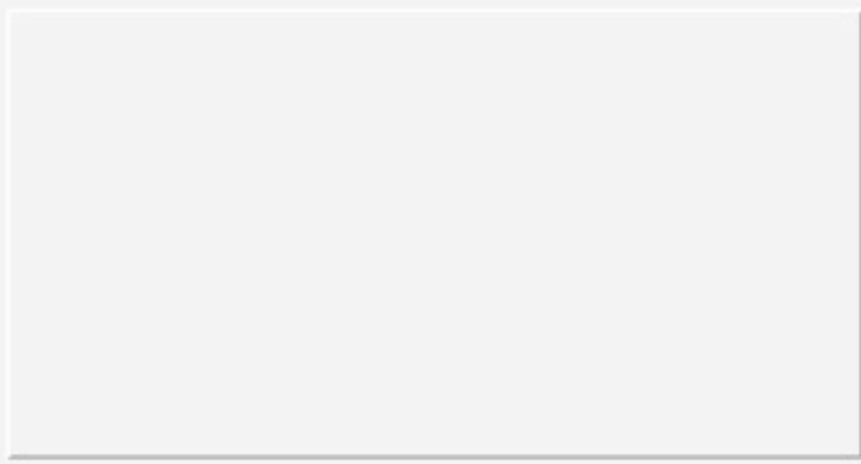
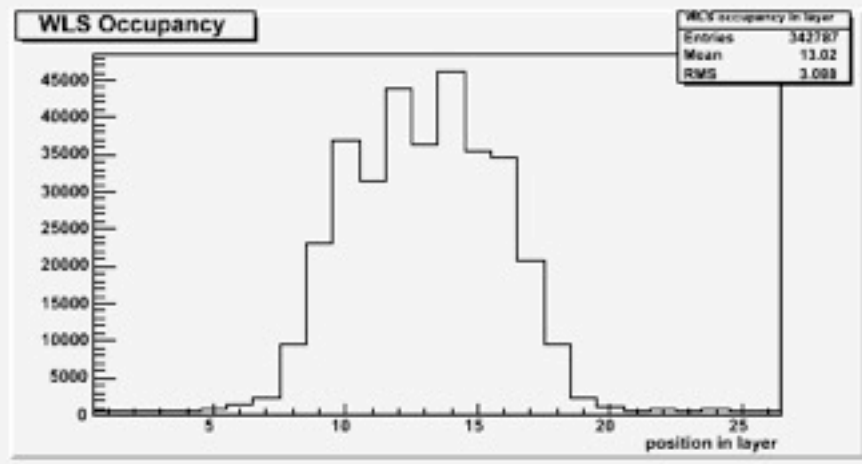
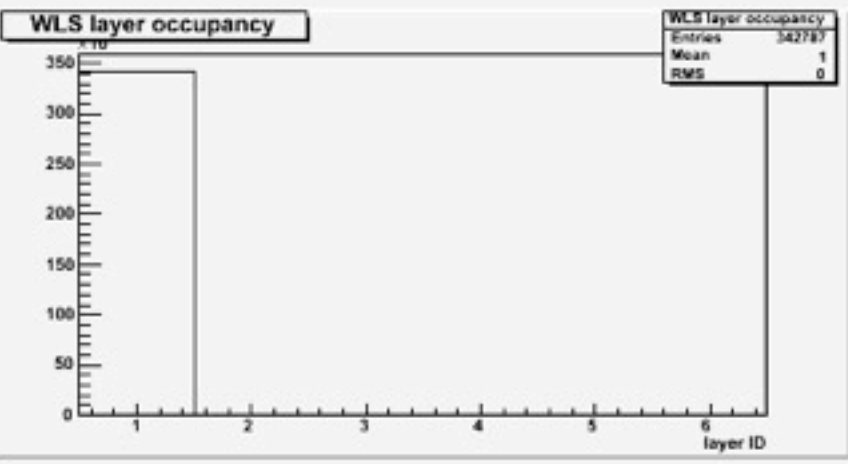
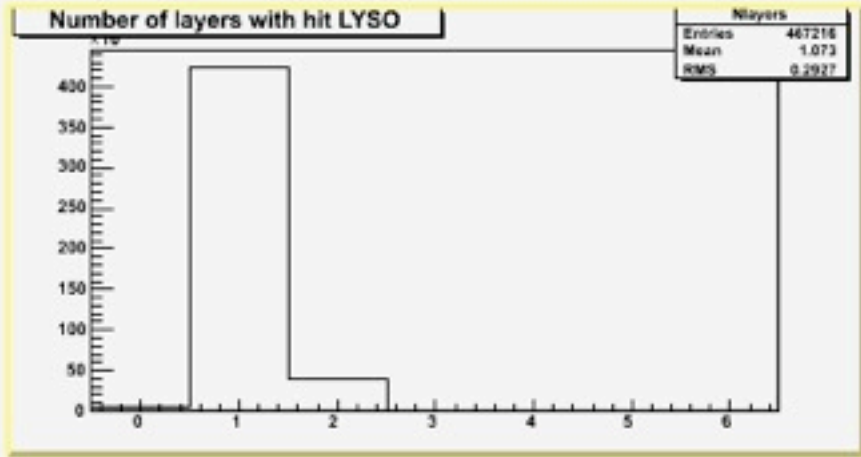
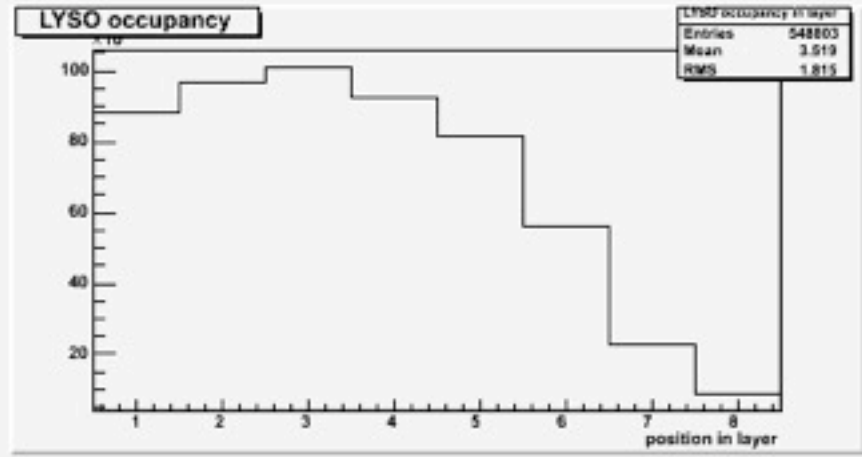
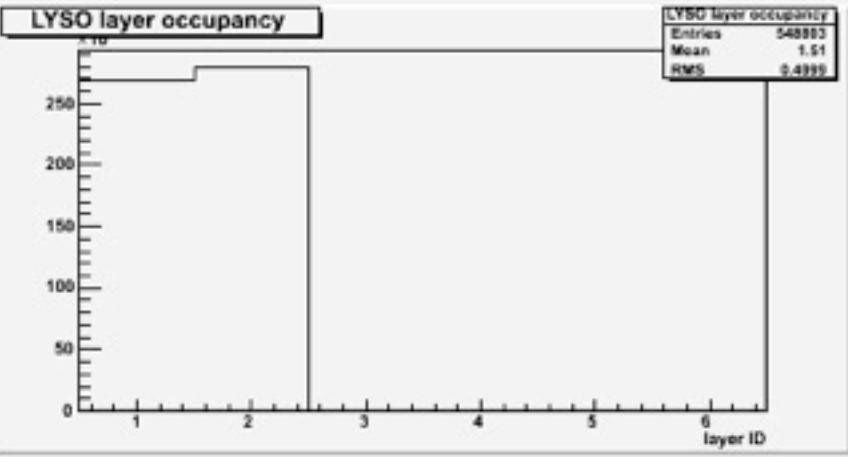
Correlation N_LYSO N_WLS	
Entries	467216
Mean x	0.7335
Mean y	1.175
RMS x	1
RMS y	0.4329

Correlation N_LYSO N_WLS first layer

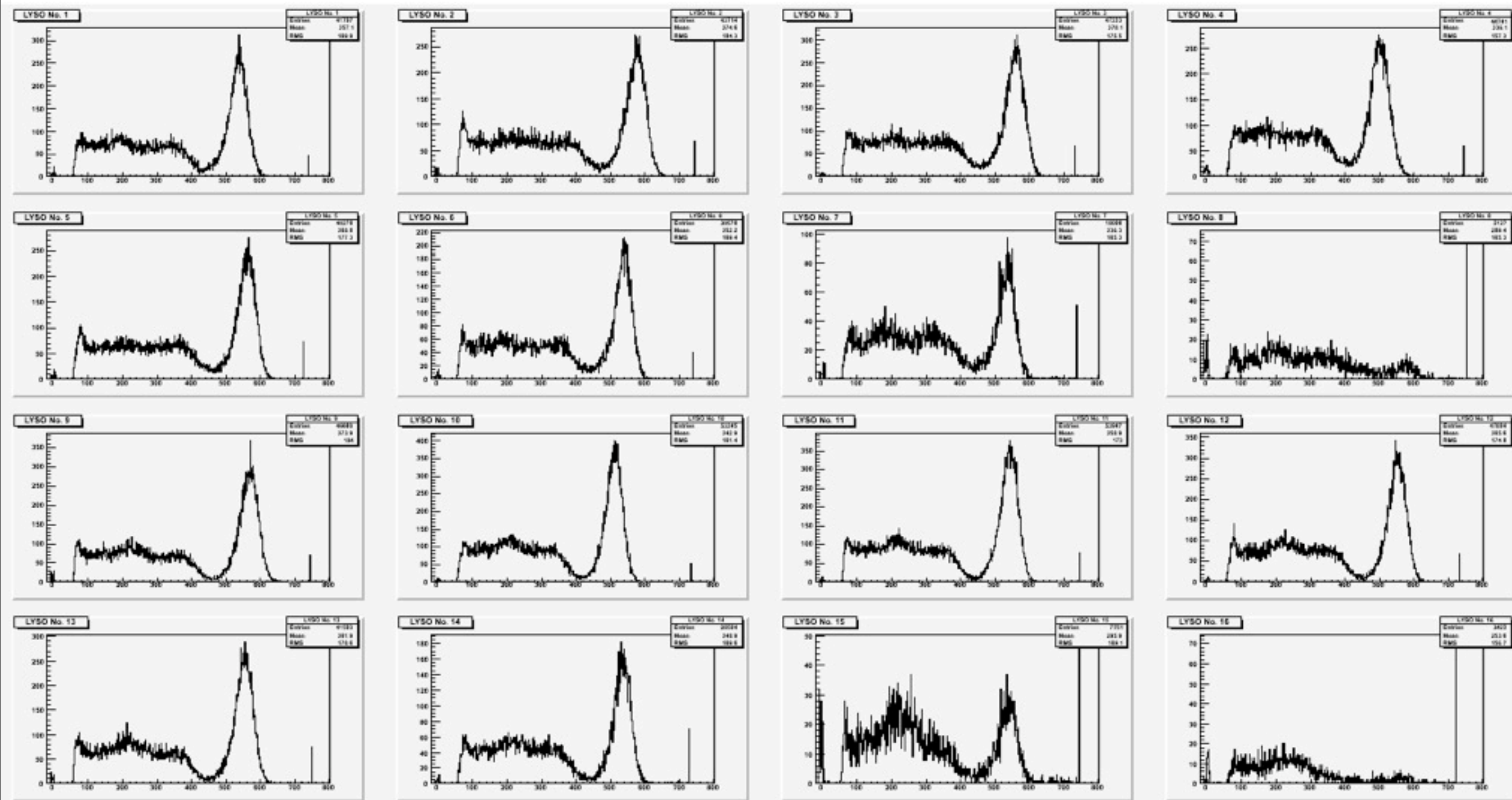
Correlation N_LYSO N_WLS first layer



Entries	250383
Mean x	1.369
Mean y	1.073
RMS x	0.999
RMS y	0.3277

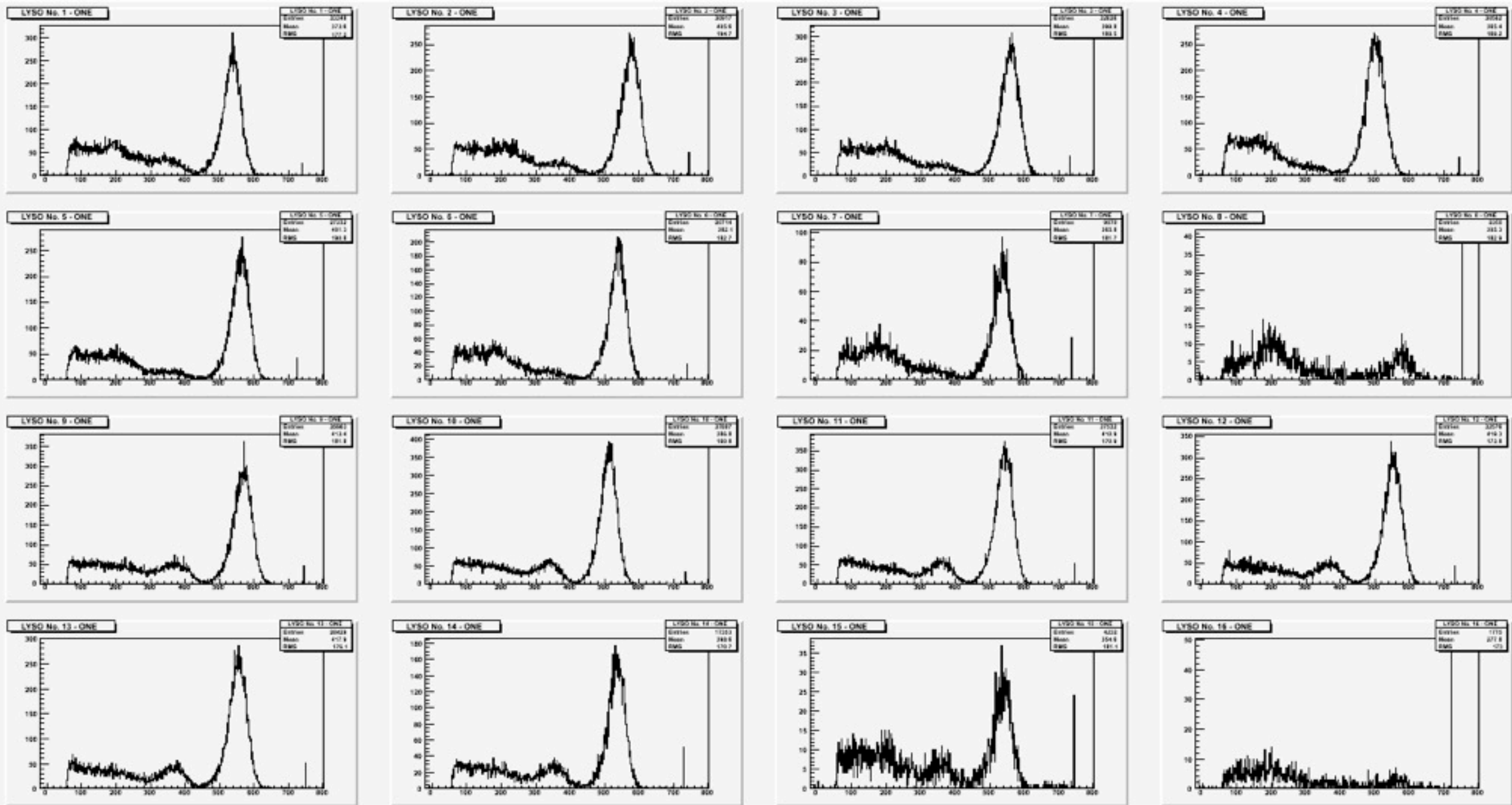


all lyso crystal (no cuts)



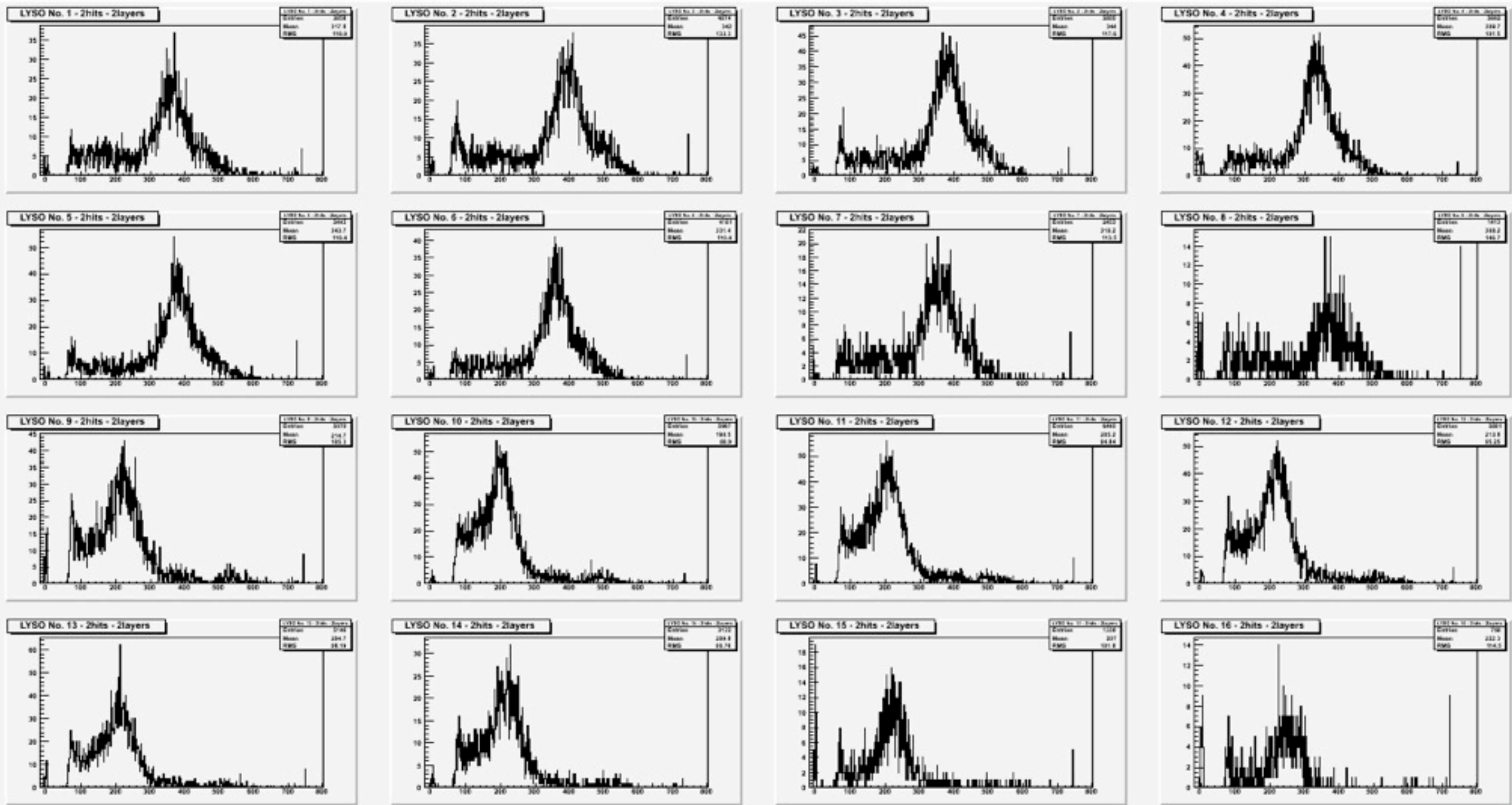
- good uniformity already before any calibration
- who are the zeros ???

lyso distr. when $N_{\text{lyso}} = 1$



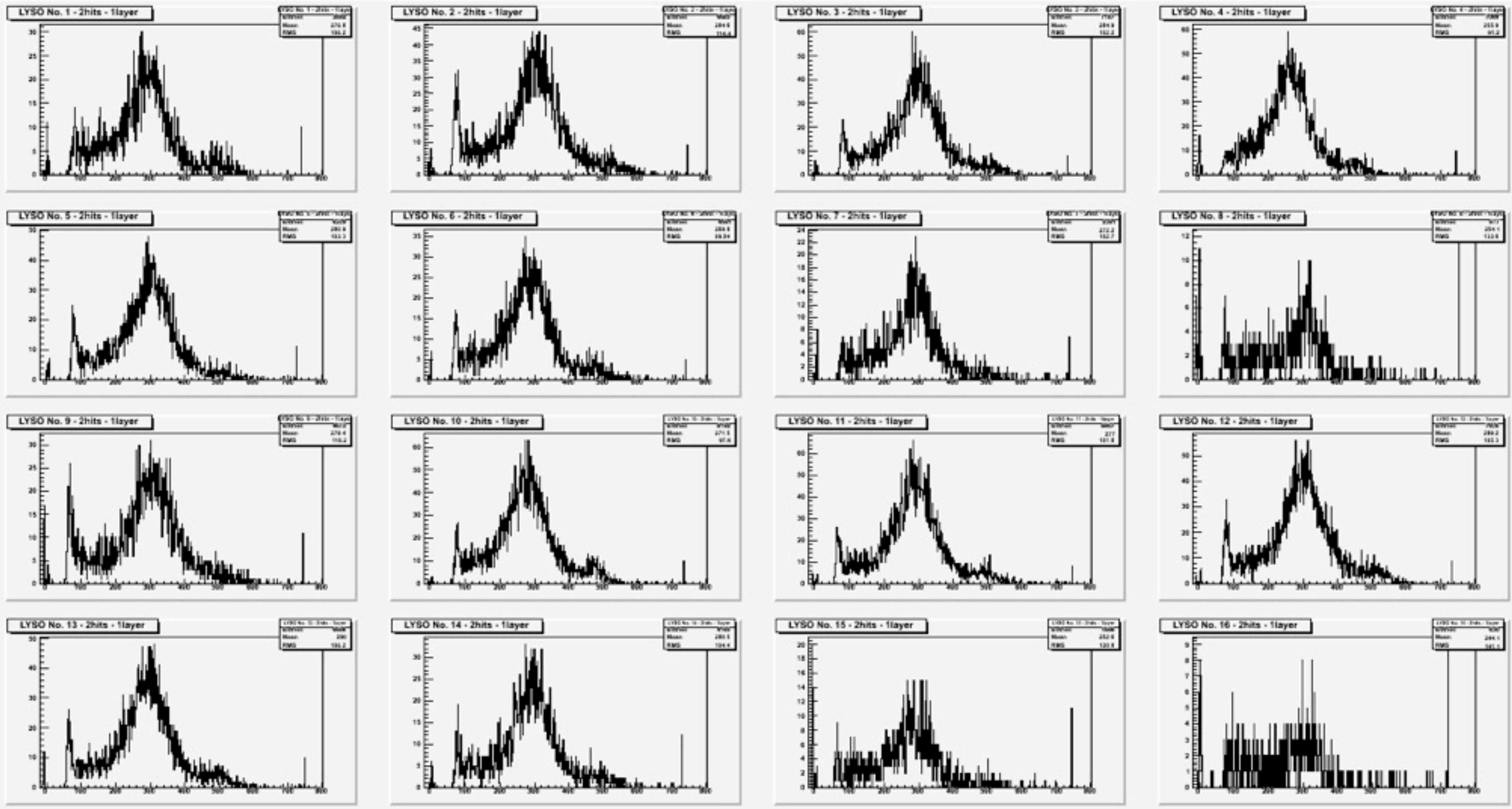
no more peaks at zeros when $1! \text{ lyso}$ is seen

lyso distr. when $N_{\text{lyso}} = 2$ on different layers



clear diff. btw group 1-8 (1st layer) and 9-16 (2nd layer)
understandable from kinematics of compton scattering

lyso distr. when $N_{\text{lyso}} = 2$ on the same layer

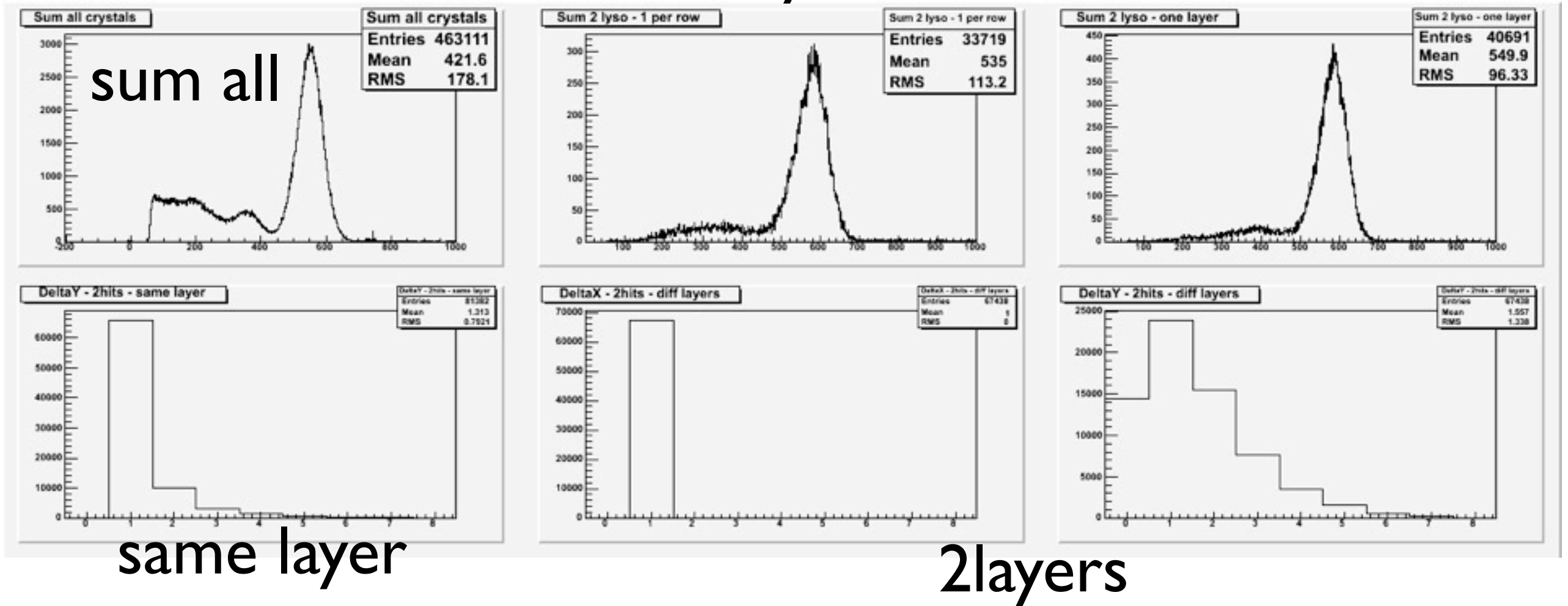


lyso sums

sum when 2 lyso:

2layers

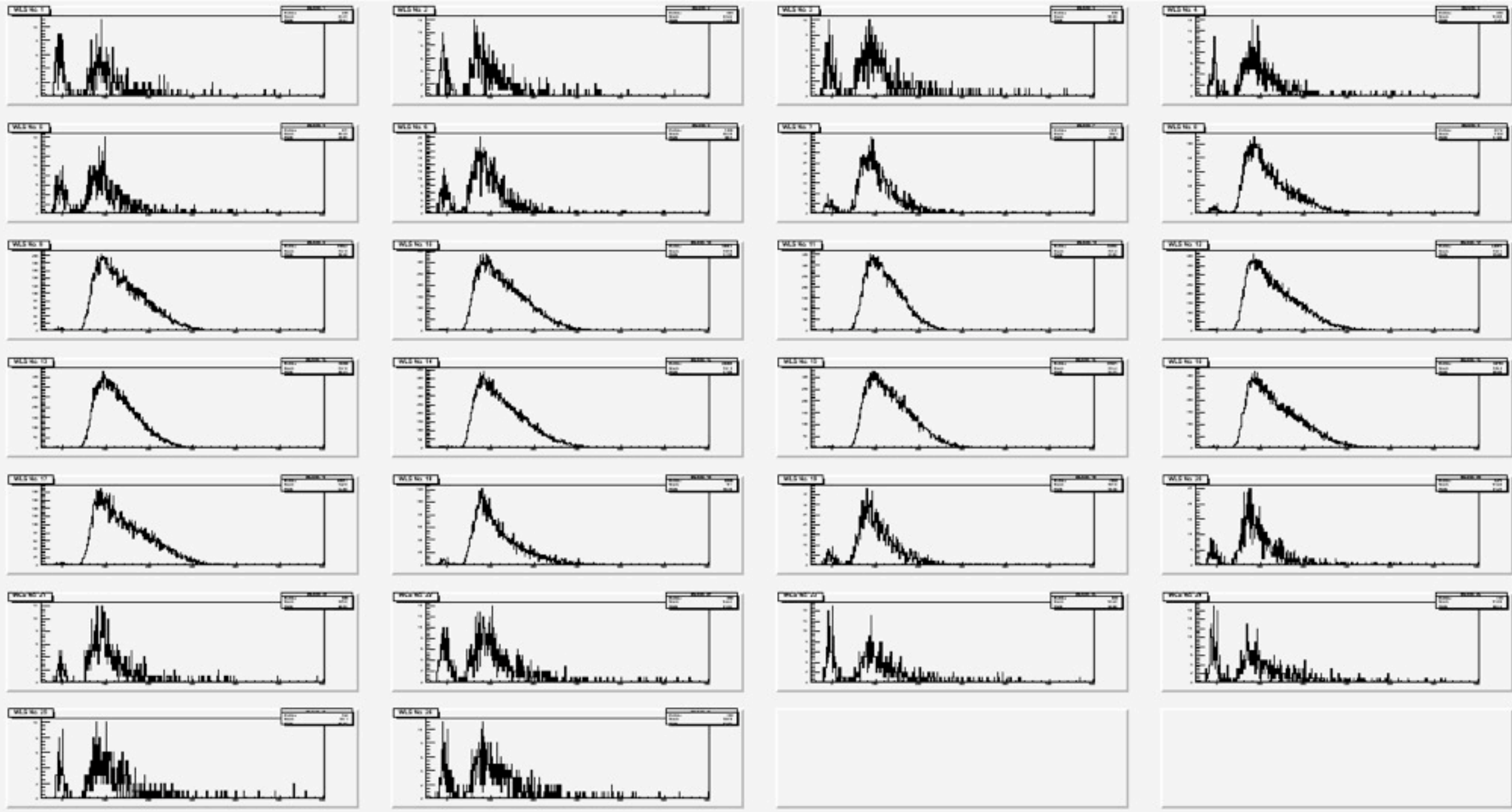
same layer



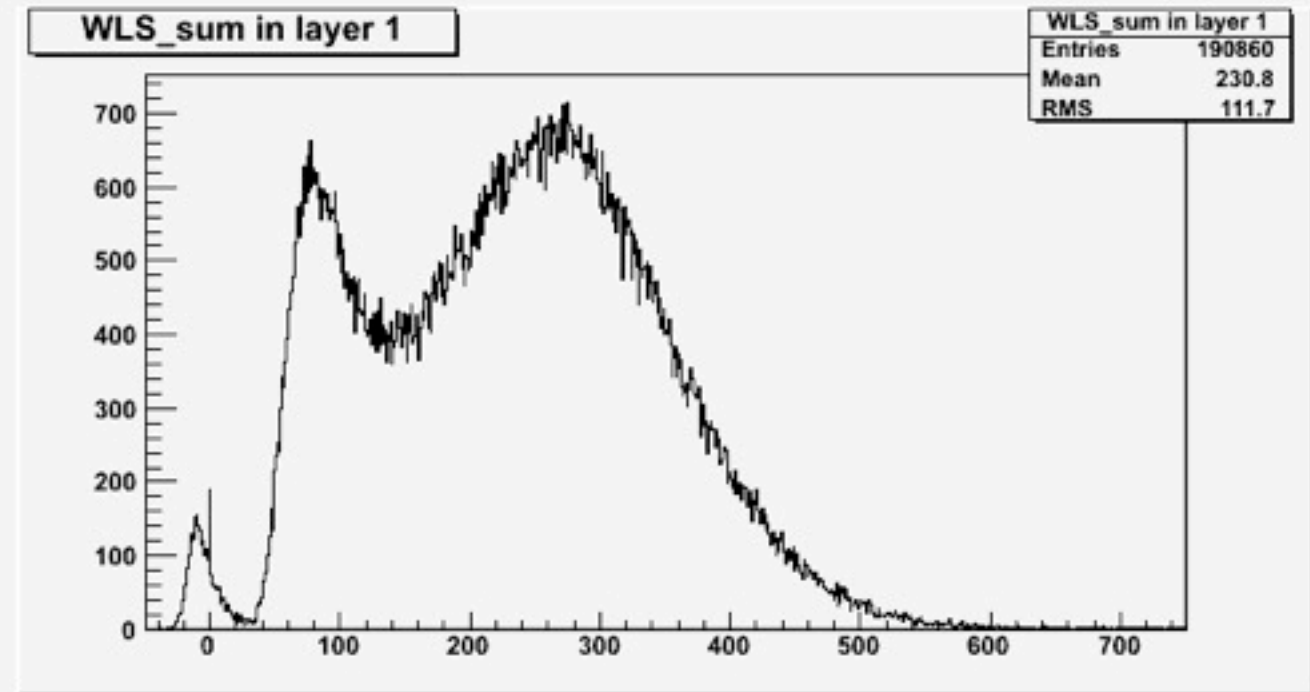
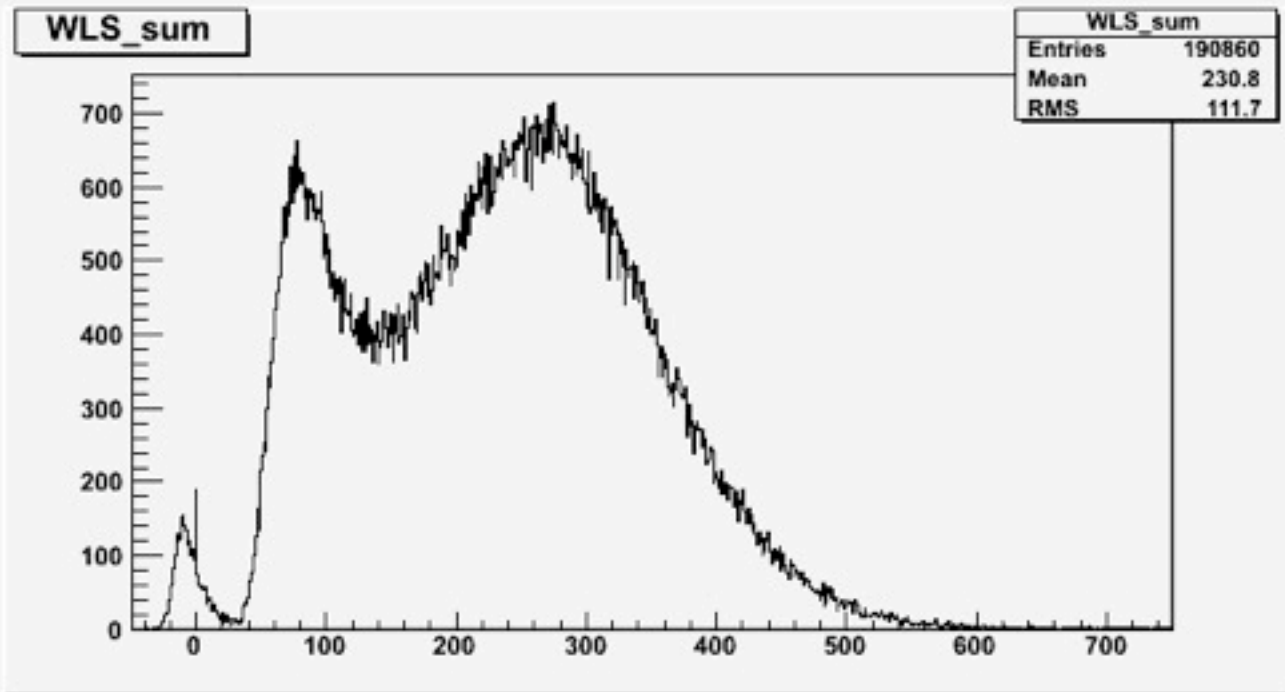
- in the sum, no trace of peak at zero left (inconsistency with online histos ???)

- with 2 lyso, 1 or 2 layers cases are equally probable

wls distr. all

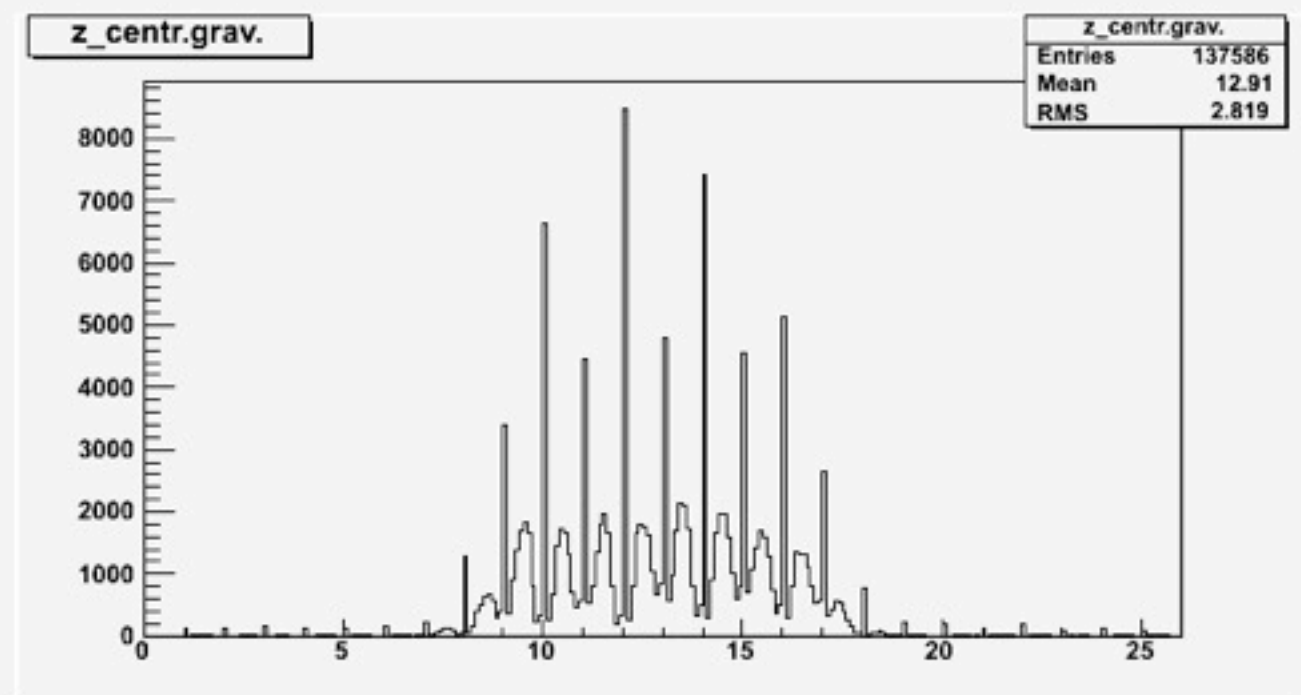
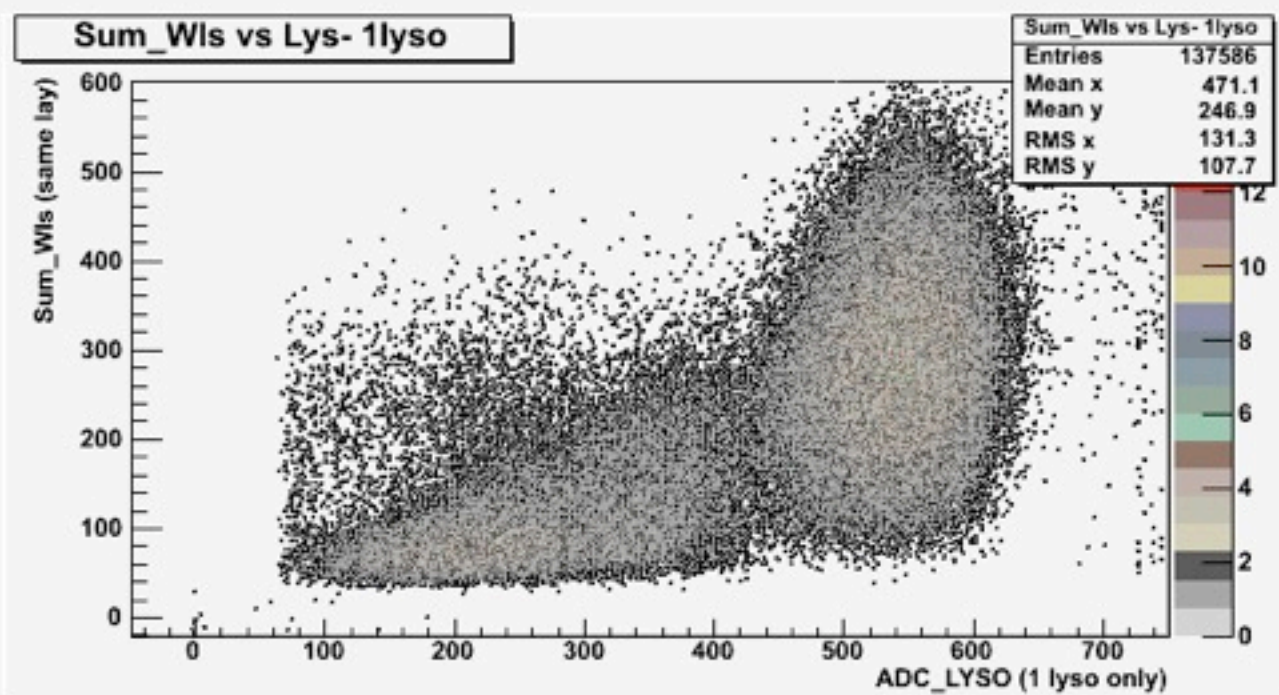
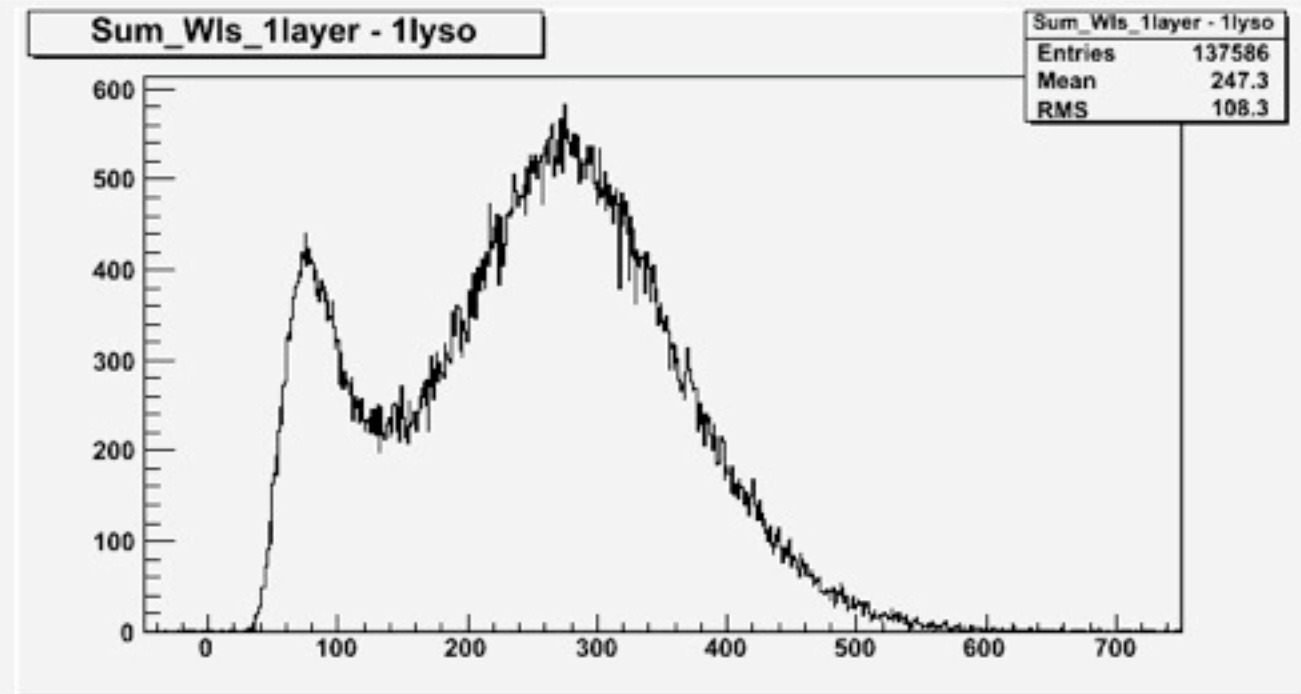
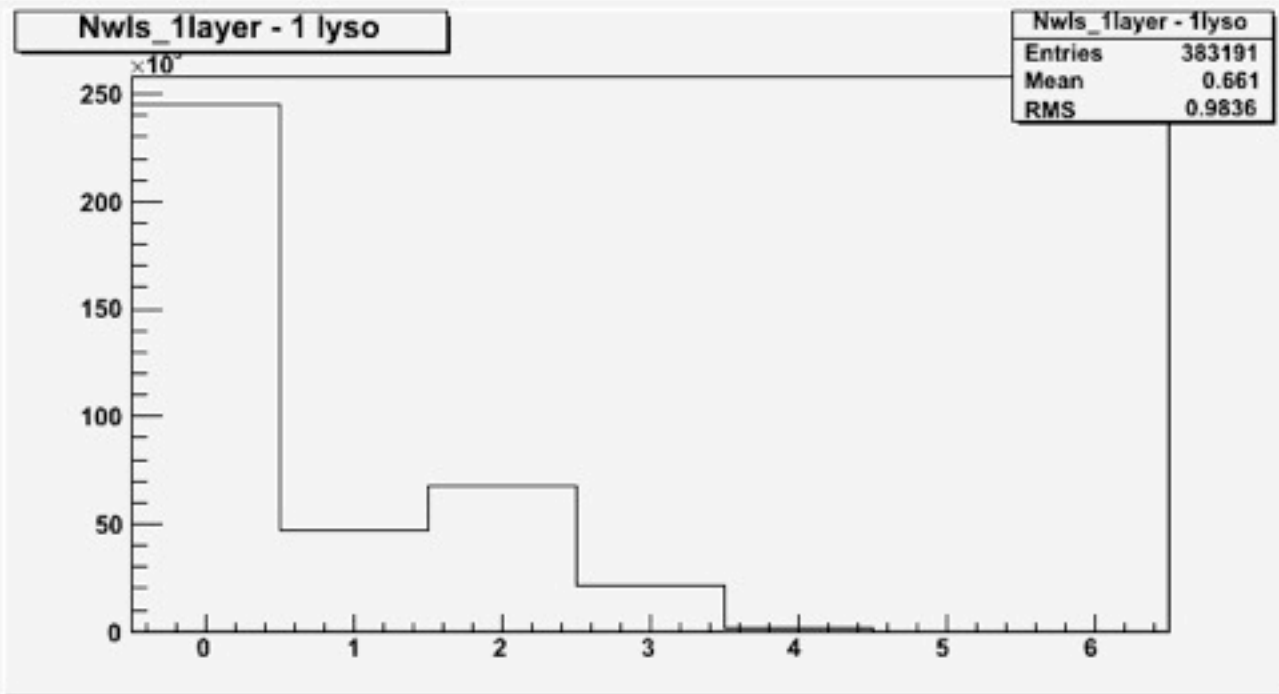


wls sum



- the 2 plots are of course identical (1 layer only)
- inconsistency with the equivalent online histo (???)

wls distr. with one lyso only, on the first layer only



pmt

