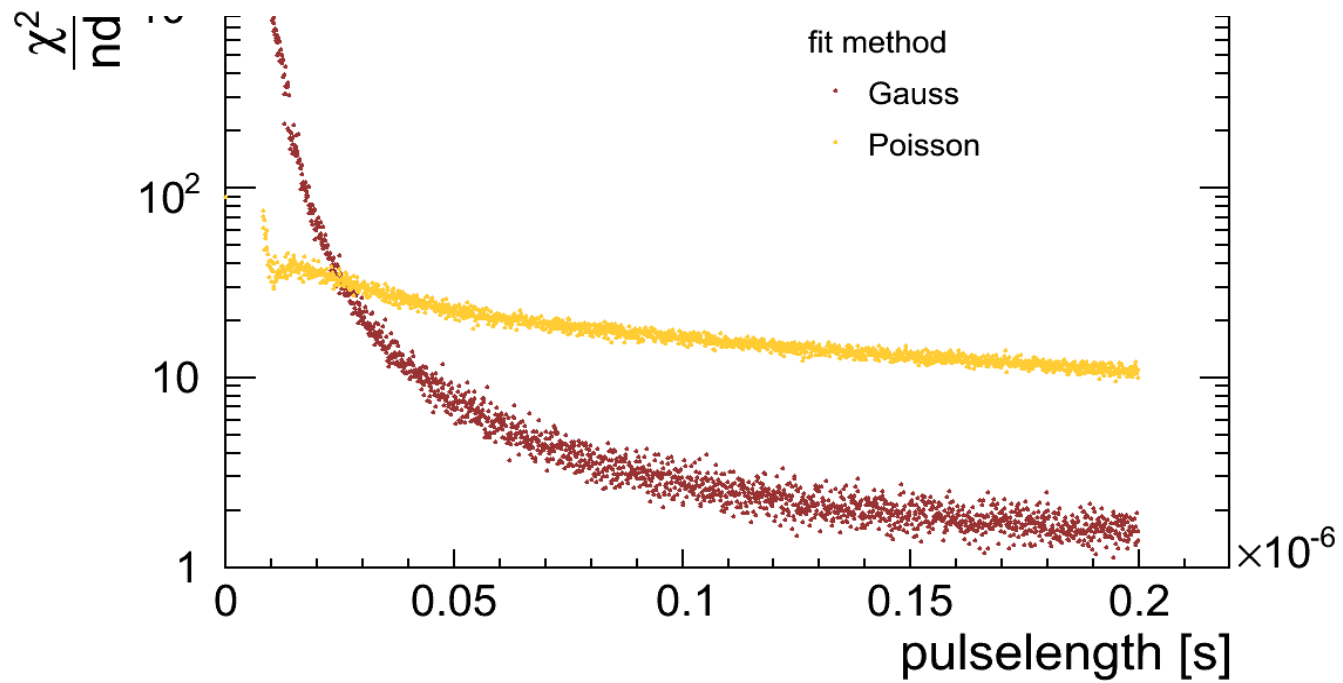
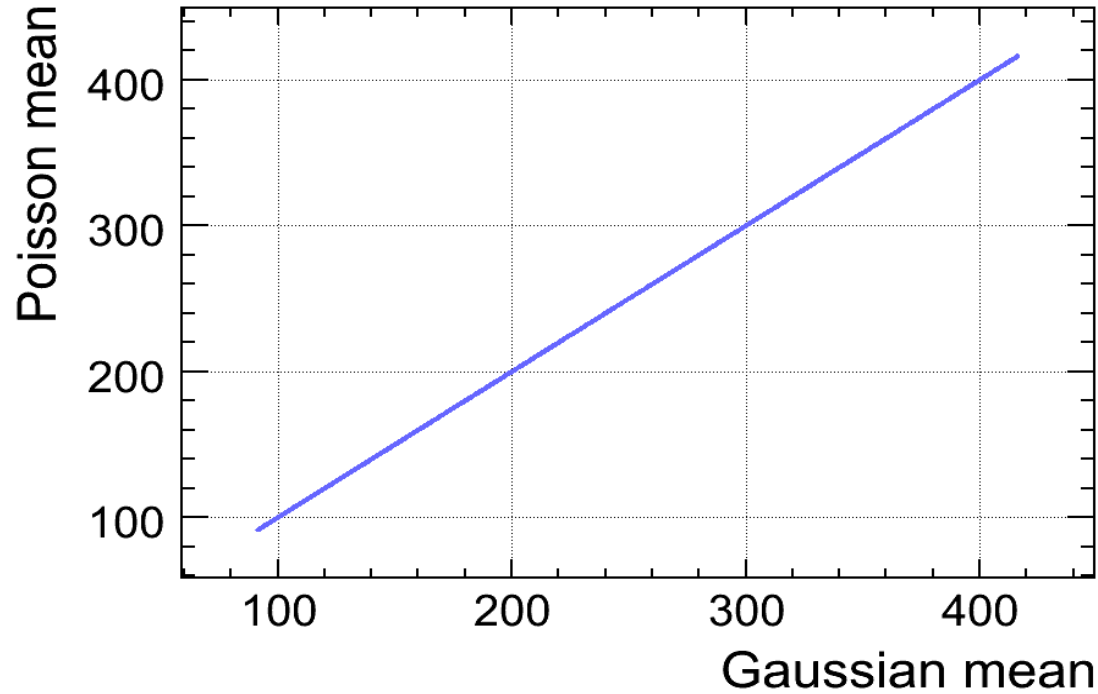


# Poisson/Gauss comparison

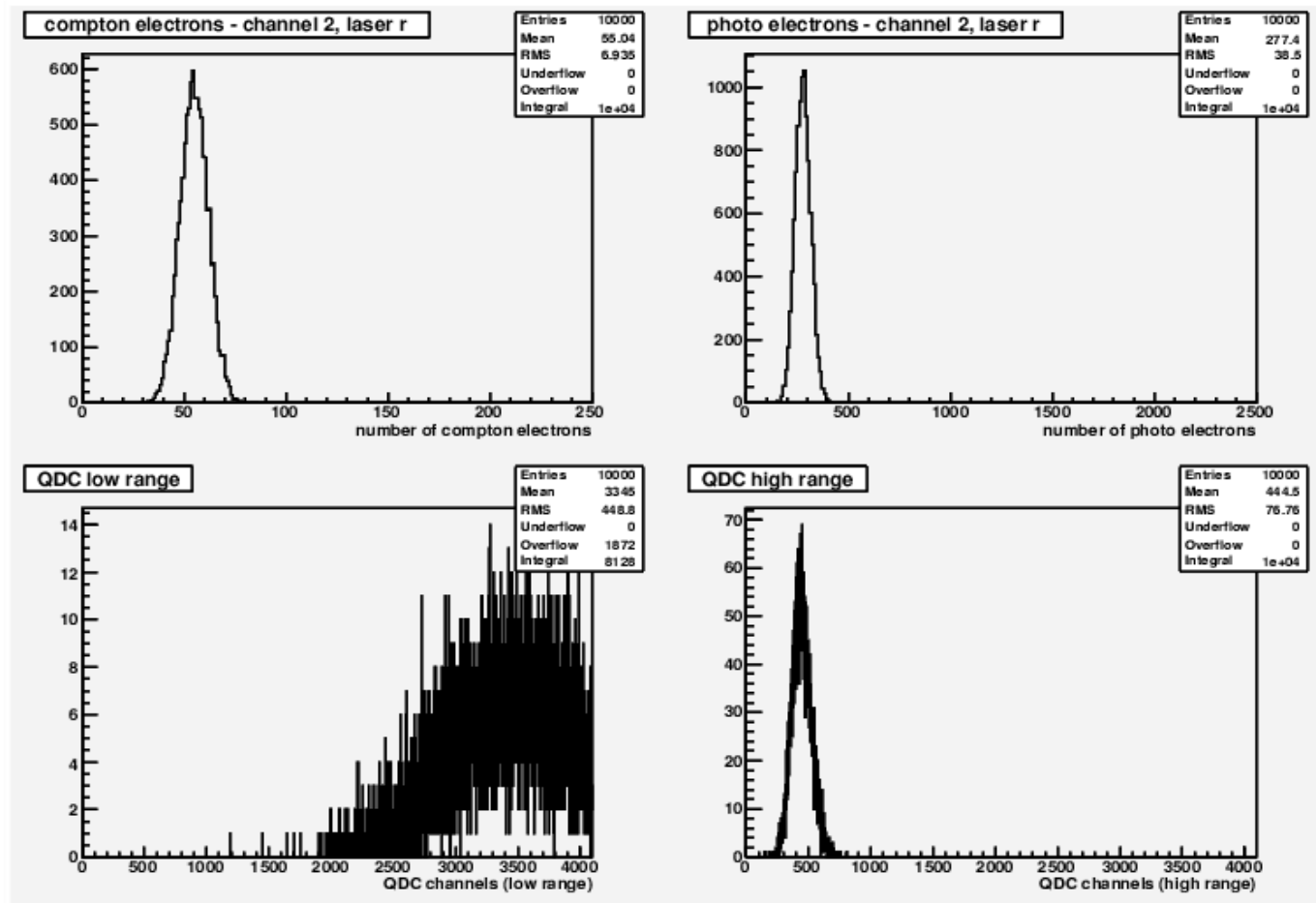
/scratch/vormwald/100720\_006



# Dynamical range of the detector

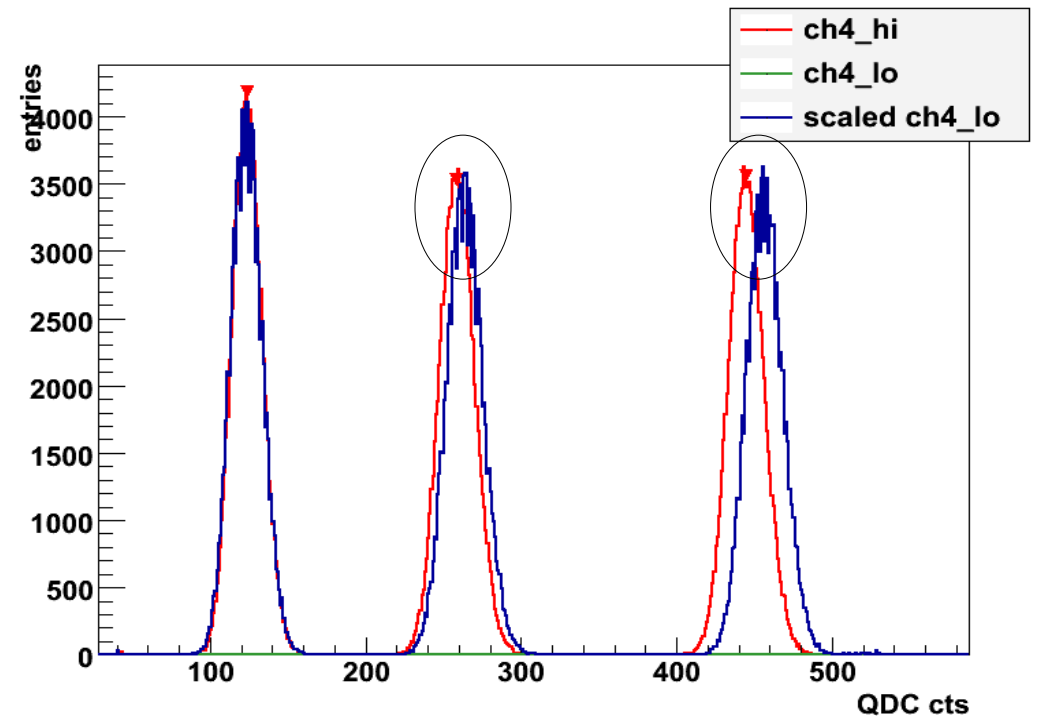
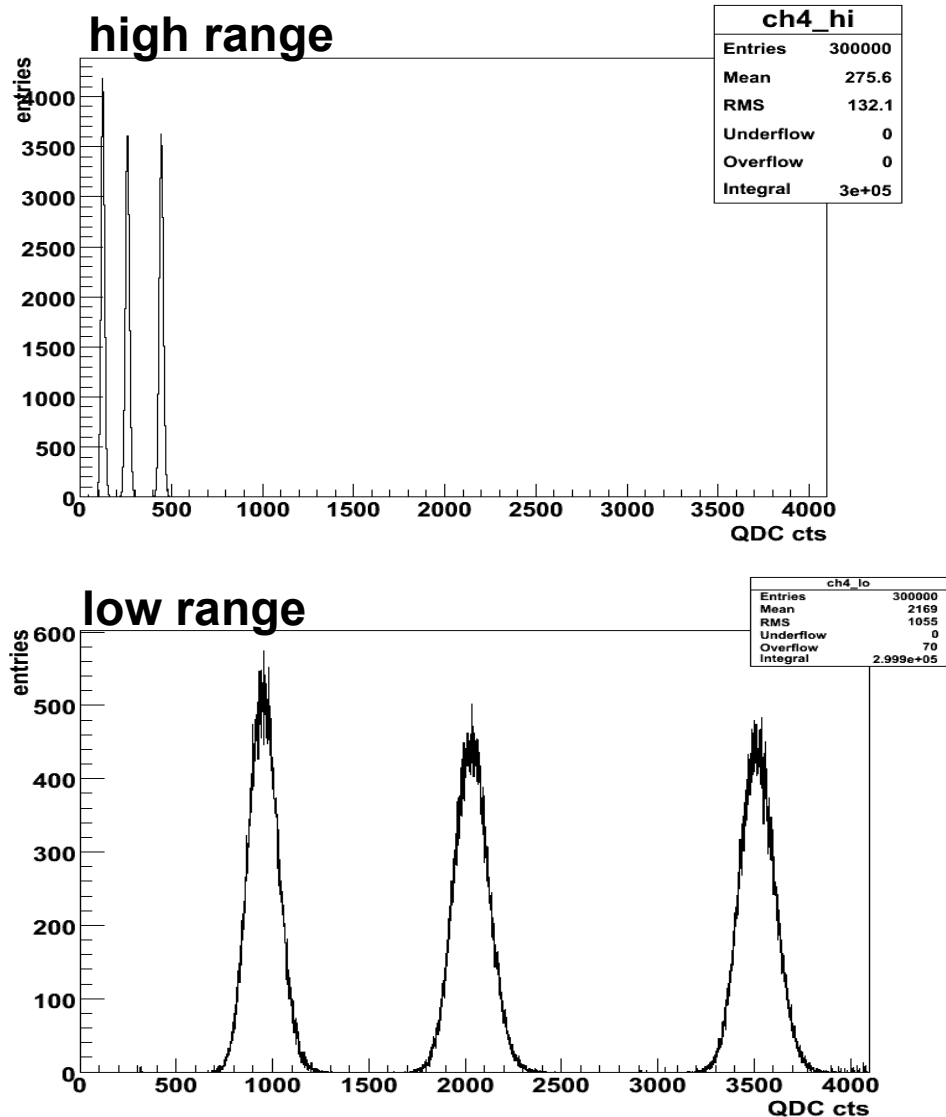
—▶ detectorRange.pdf

- per detector channel  $\sim$  0-200 compton electrons
- per compton electron  $\sim$  5 photo electrons inside PMT  
-> Poissonian distributed
- gain  $\sim 2e6$
- digitalisation via QDC  
high range => 200fC per QDC channel  
low range => 25fC per QDC channel



# Dynamical range of the detector

**Question:** Can low and high range be used in parallel (one for  $P(\text{Laser})=L$  and one for  $R$ )?  
(Is low range just zoomed/scaled version of high range?)

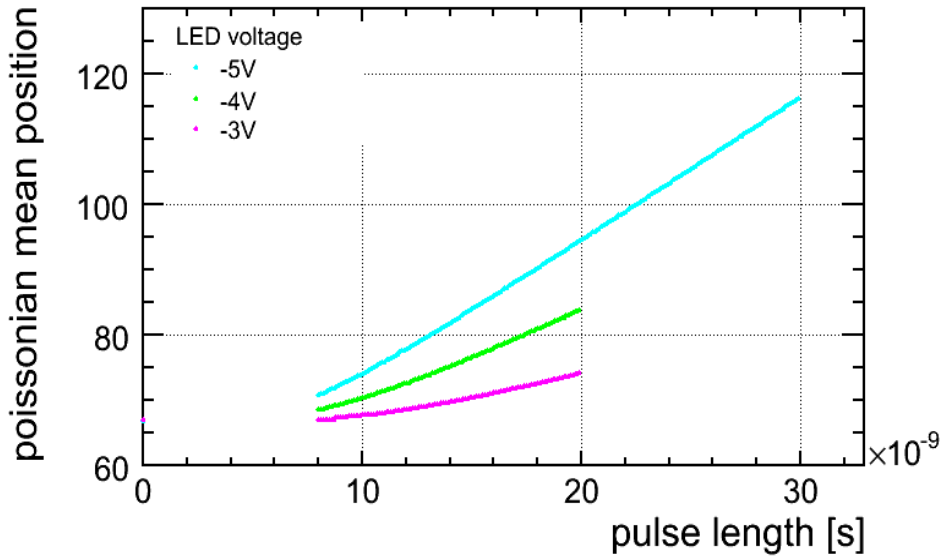


**Scale factors: 7.7 to 7.9 != 8 (!)**

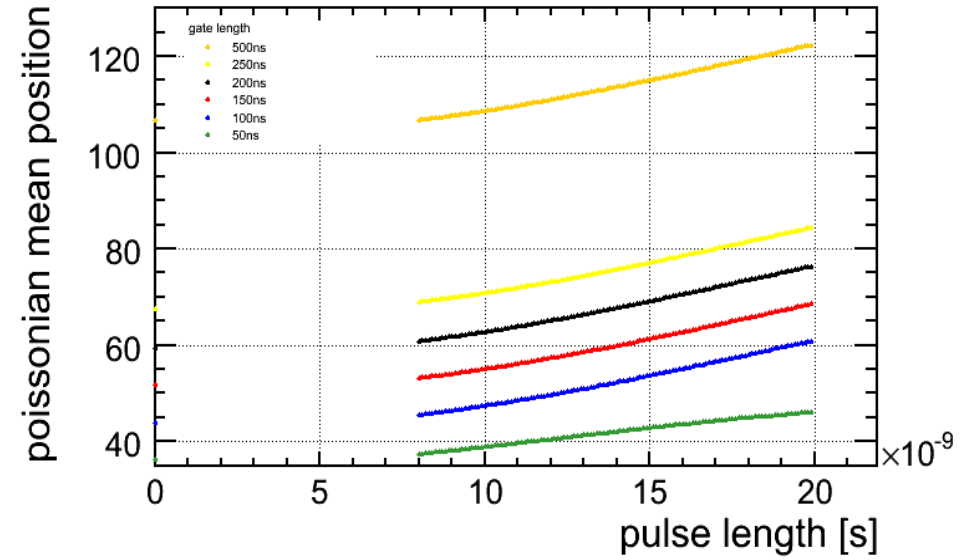


# Very short pulses

LED voltage



gate length



High Voltage

