

# Muon Calibration Coefficients for July 2007 CERN Runs

V.L. Morgunov

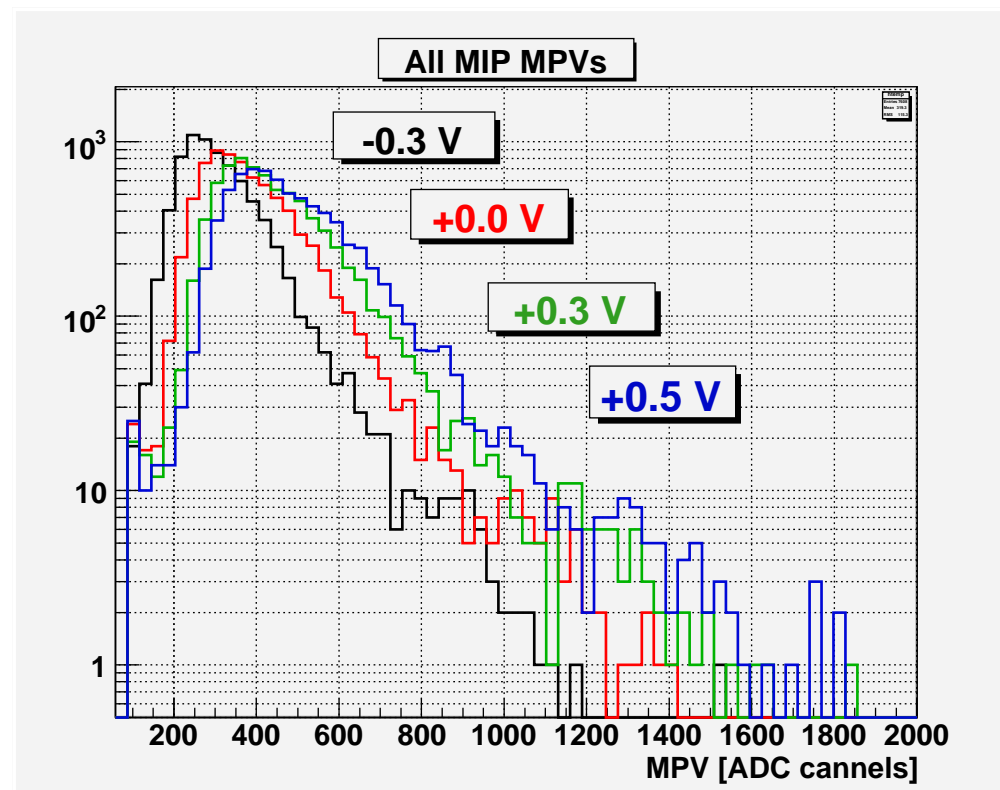
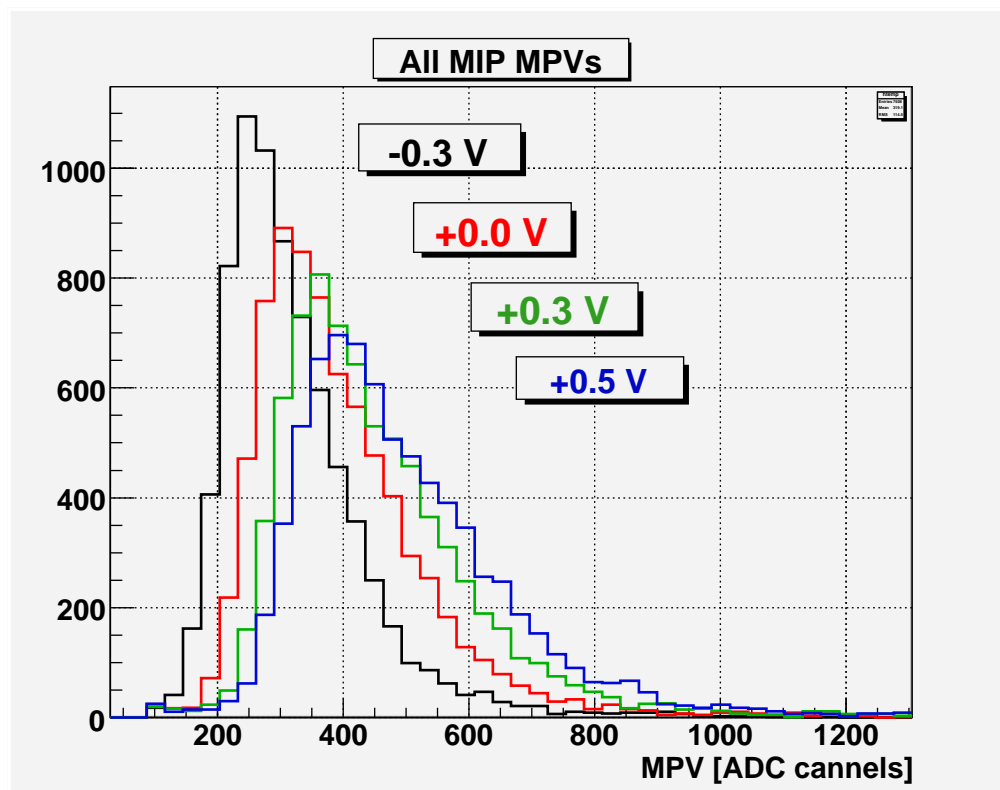
DESY – ITEP



DESY, July 2007

The copy of this talk one can find at the <http://www.desy.de/~morgunov>

## Coefficients for different HV



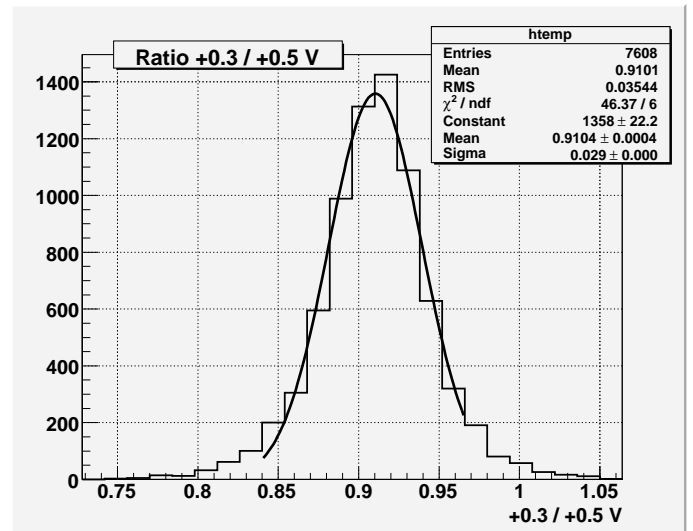
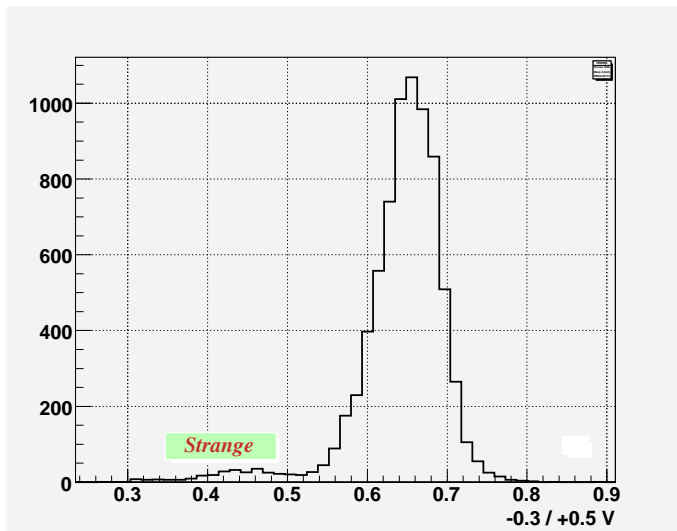
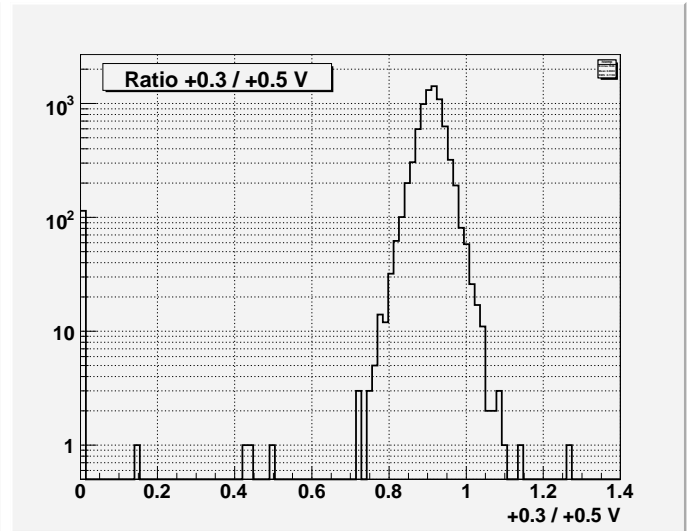
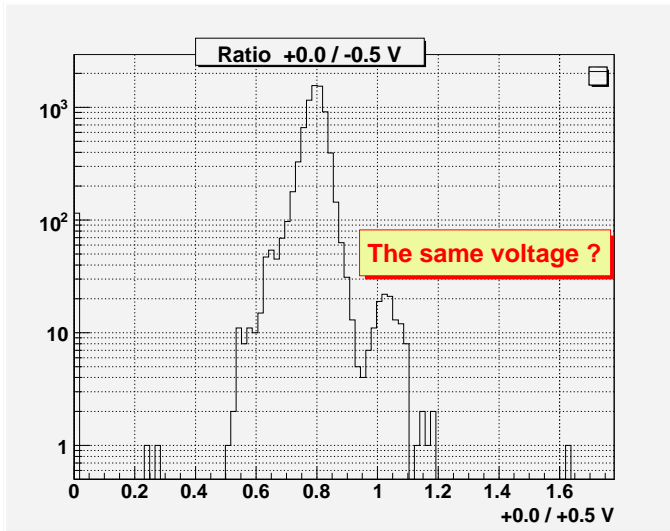
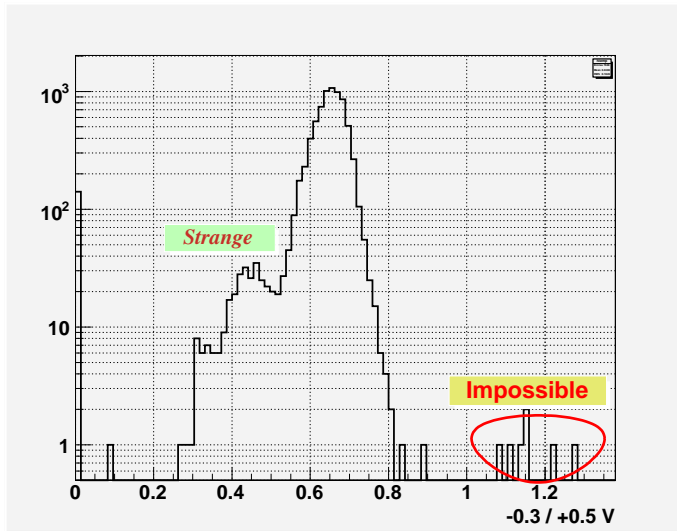
New fast Gaussian fit for muon calibration was written, see code at <http://www.desy.de/~morgunov/calice>

It's very fast (all of these results took 10 minutes), after tracks are in histograms.

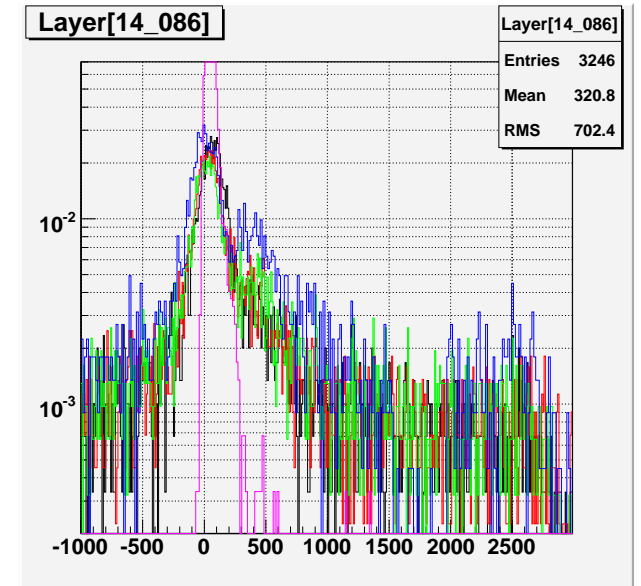
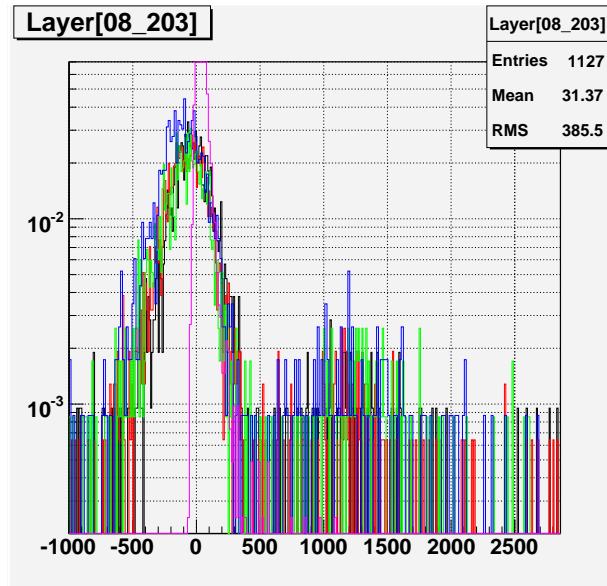
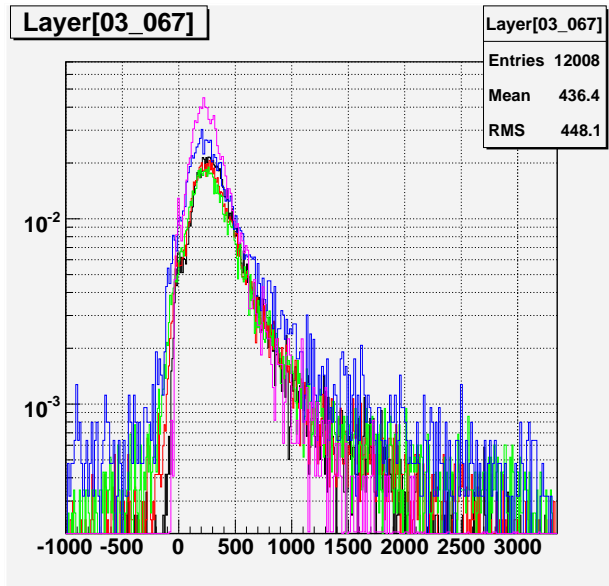
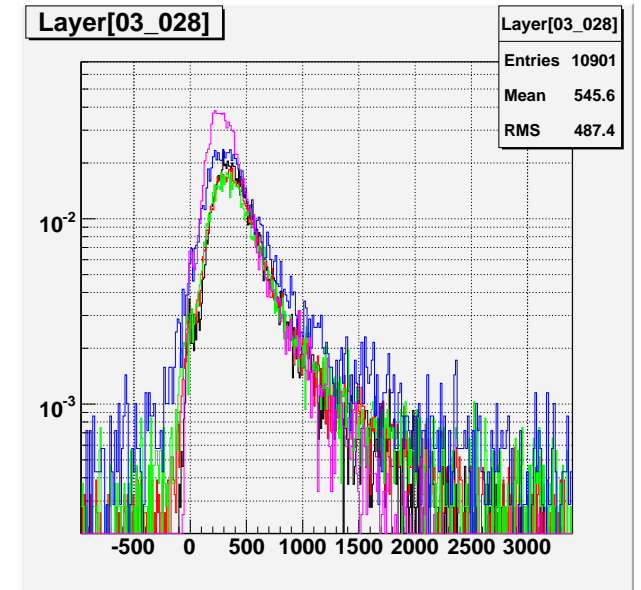
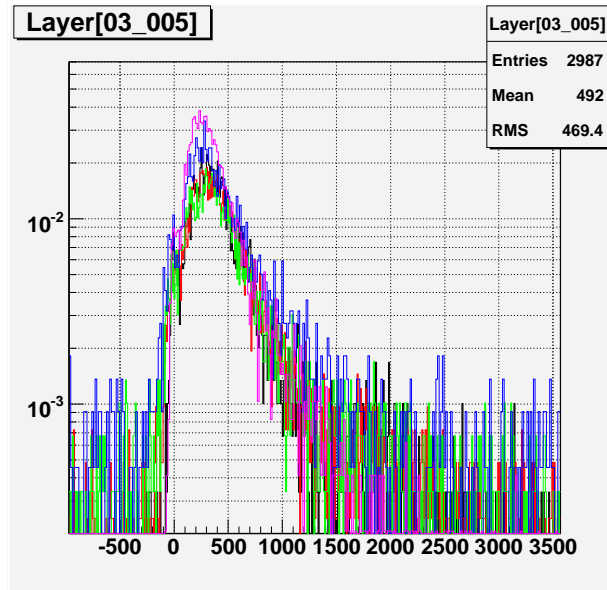
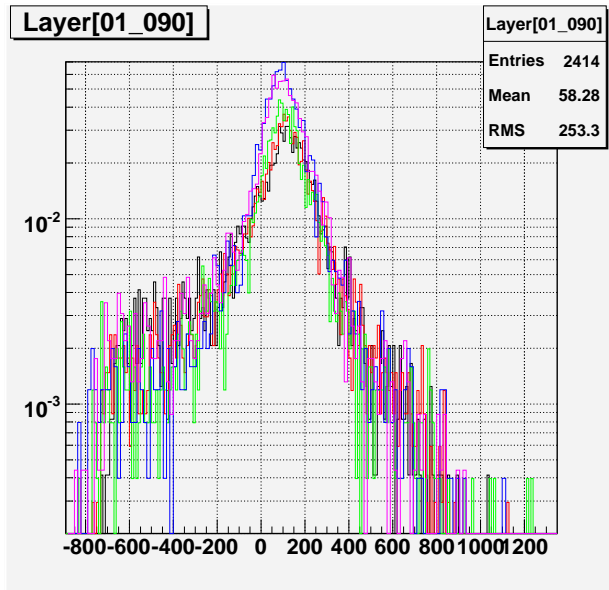
Restriction: MPV should be more than 90 ADC ch. Efficiency is better than 99.9 %. Accuracy is better than 5 %

Results of calibration presented a database file: all\_mu\_coefs.vec,  
and at the first glance all of them looks good. **BUT ...**

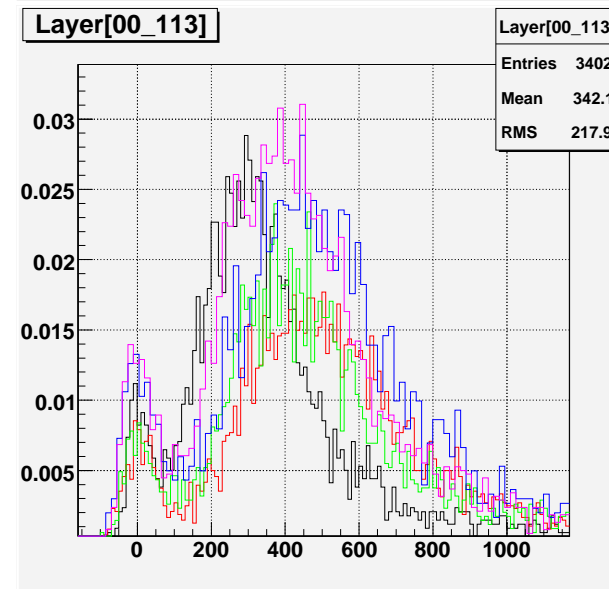
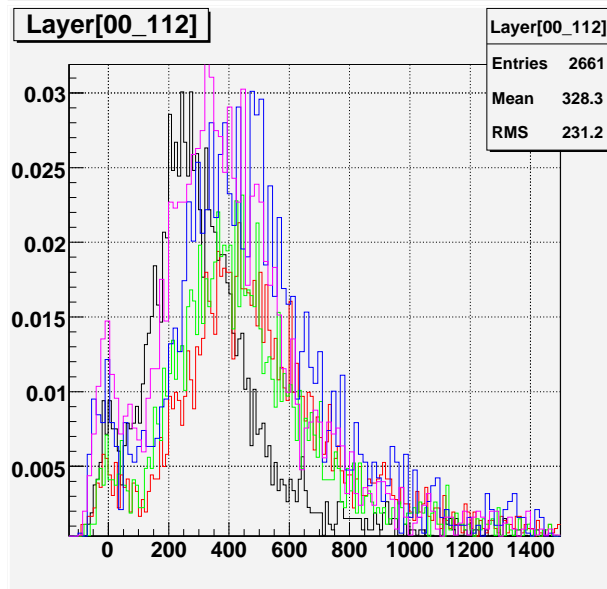
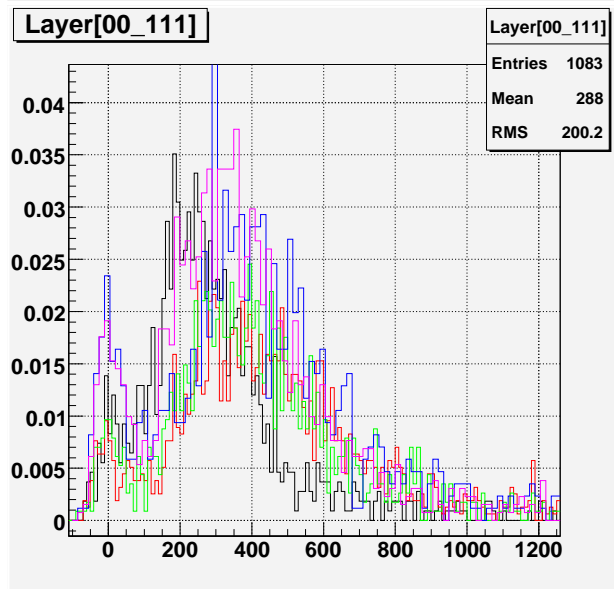
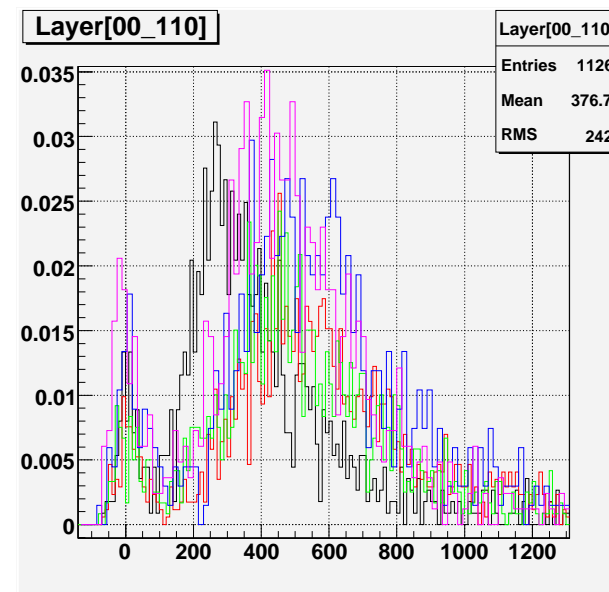
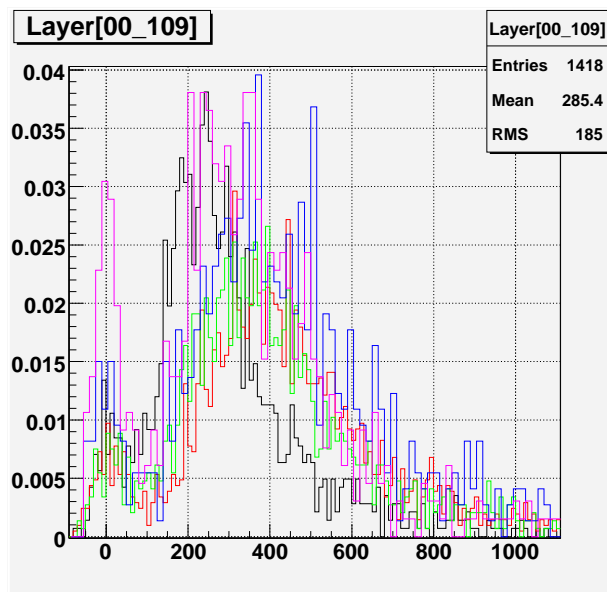
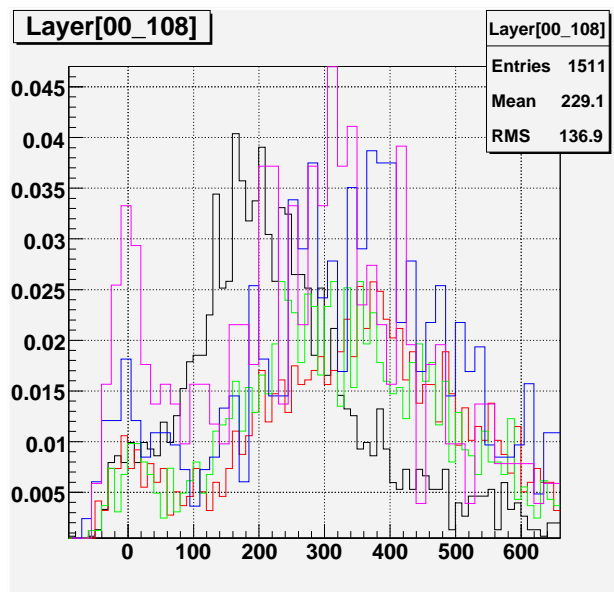
# Let us look at the ratios



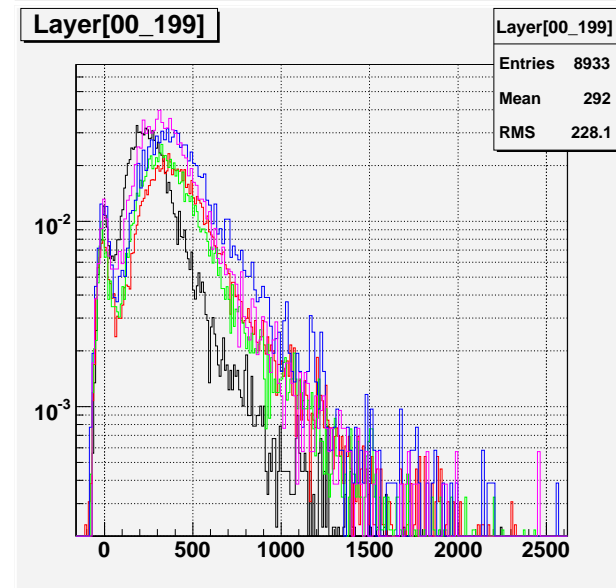
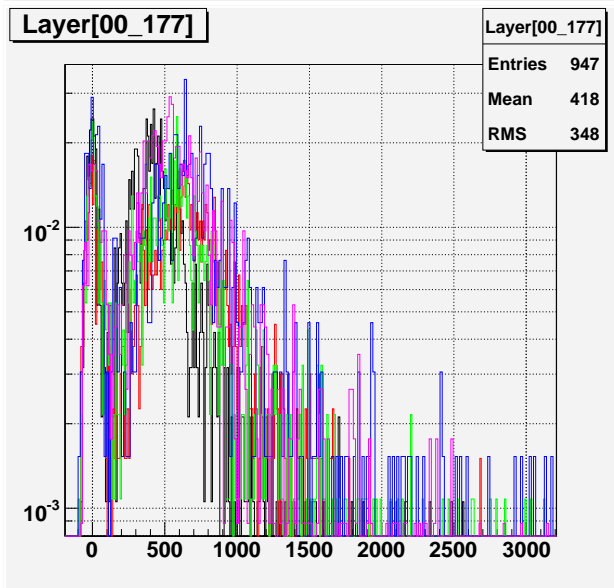
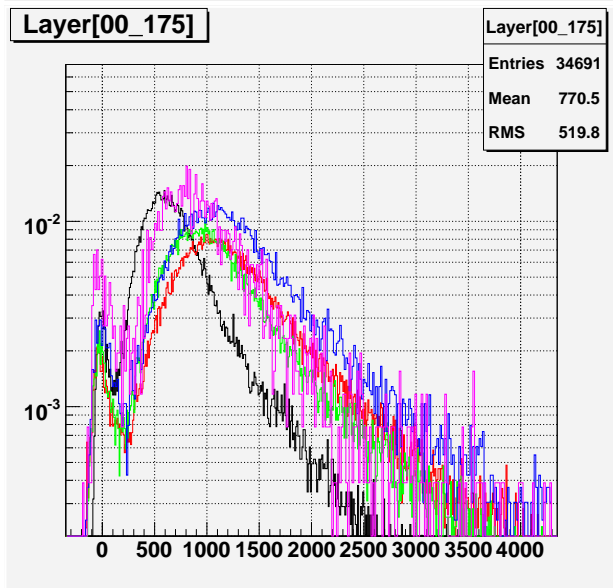
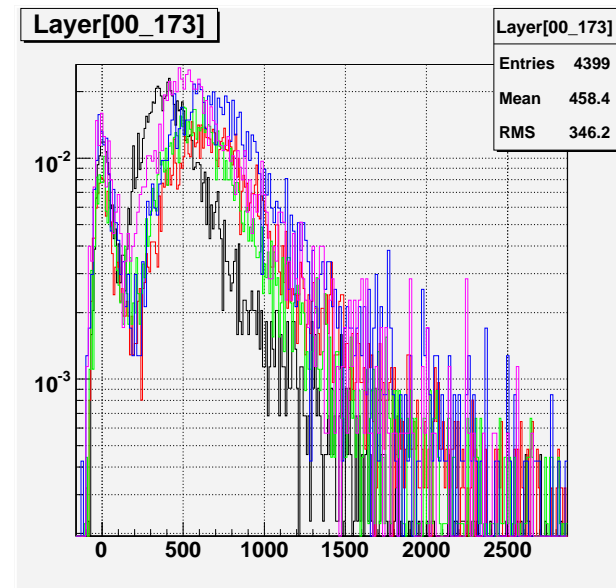
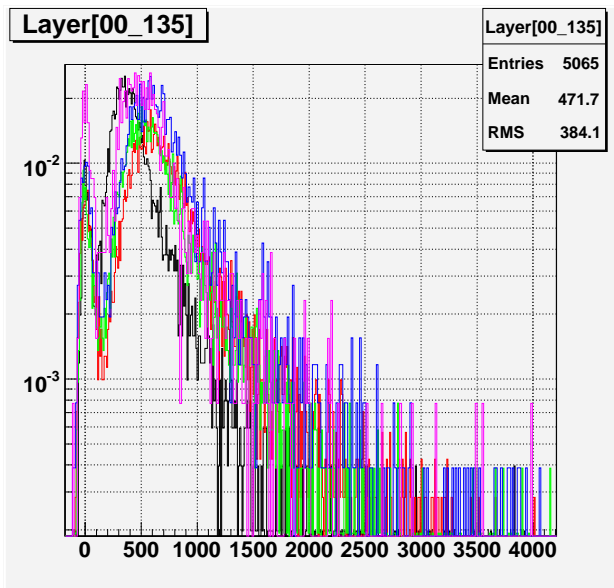
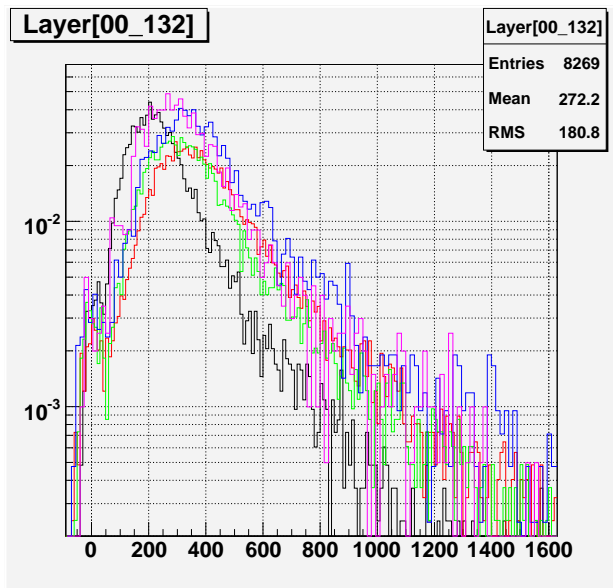
# Some channels: ratio $-0.3 / +0.5 > 1.0$



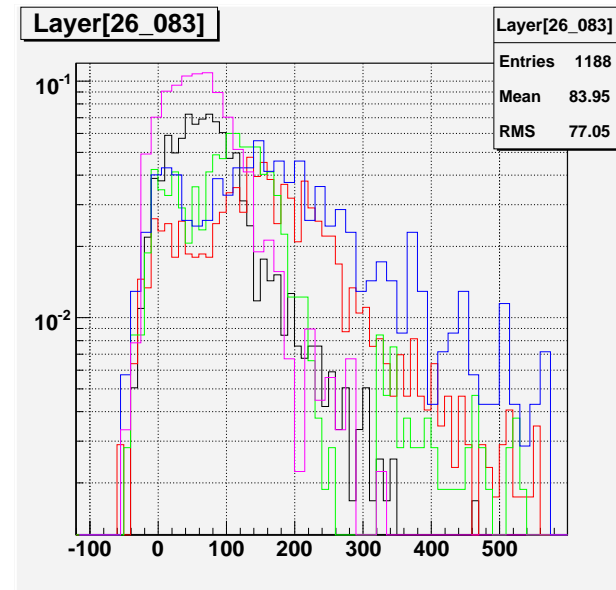
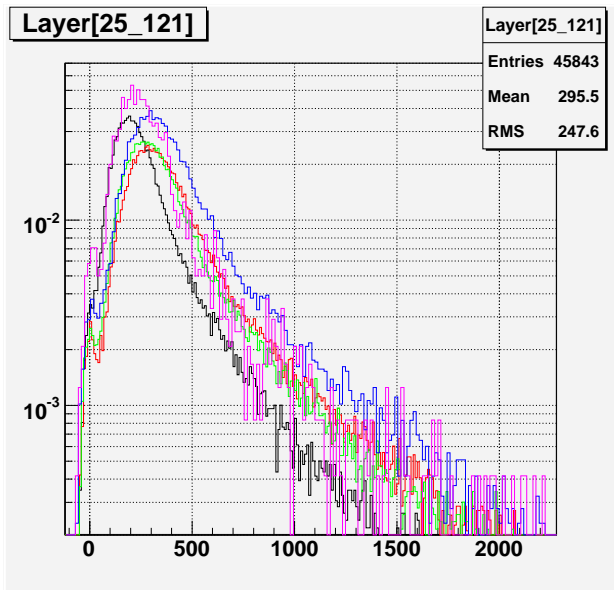
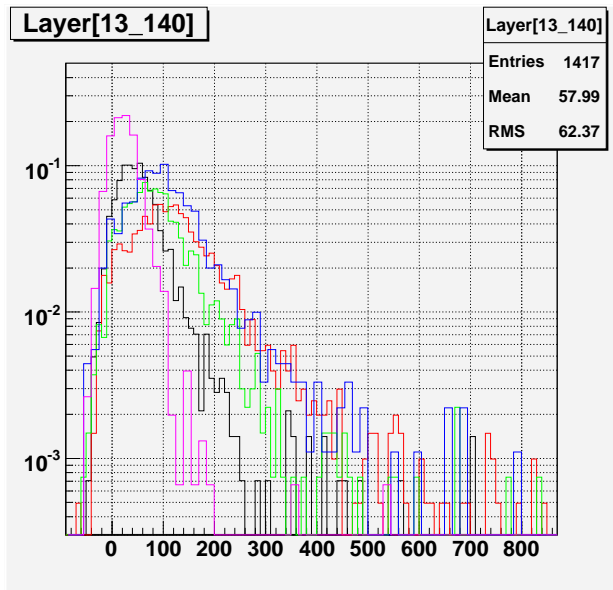
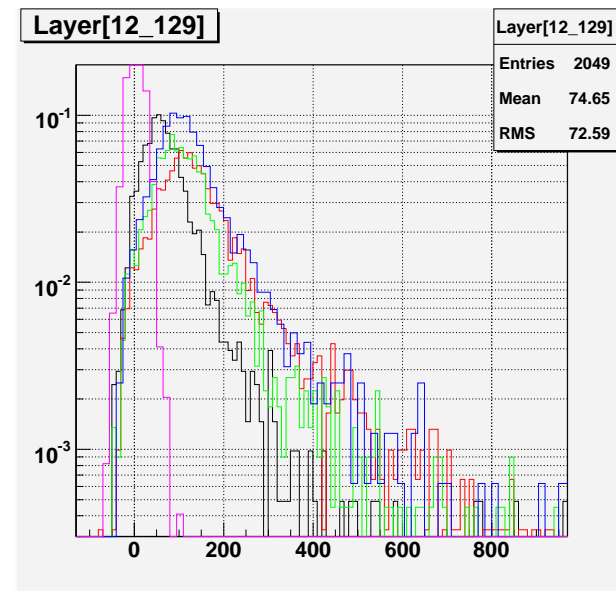
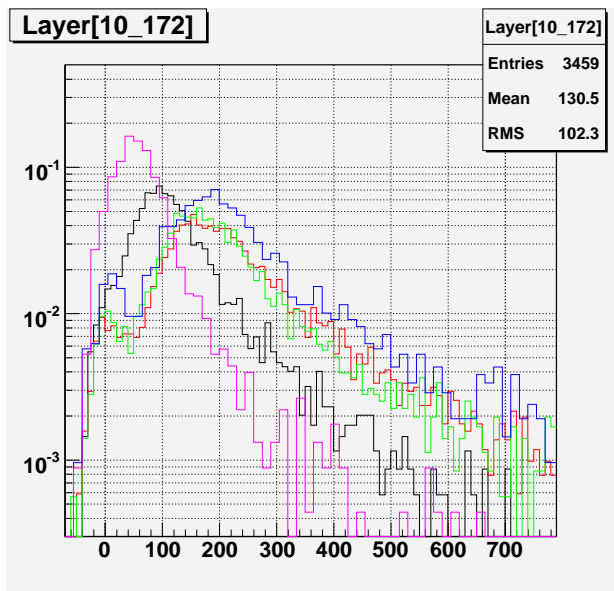
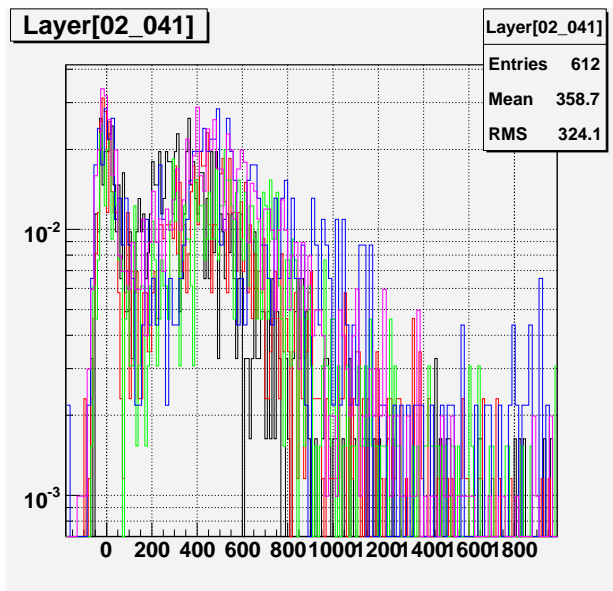
# Some channels: ratio +0.0 / +0.5 is around 1.0



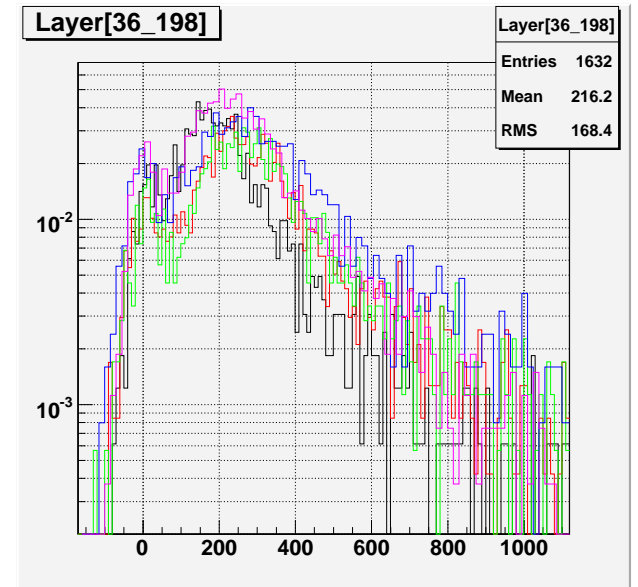
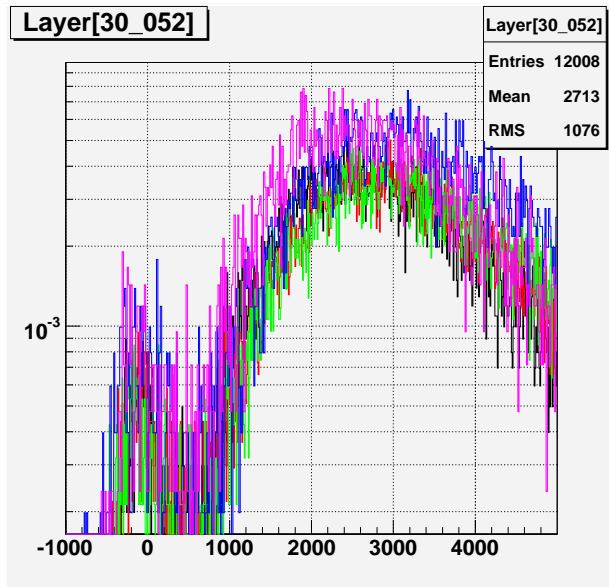
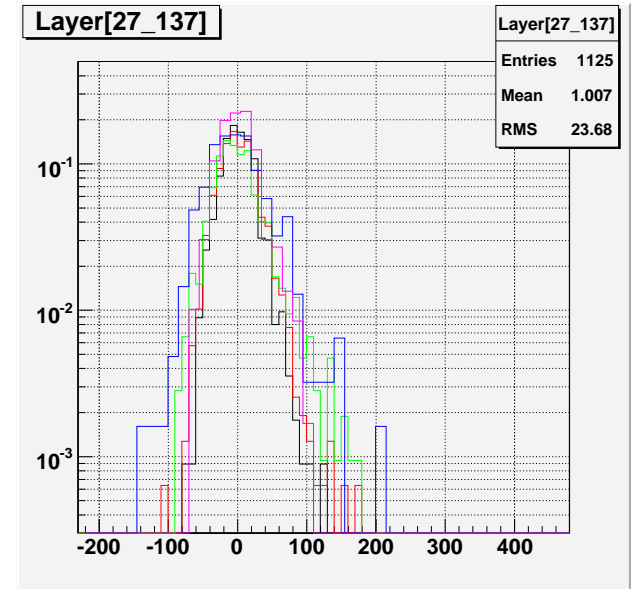
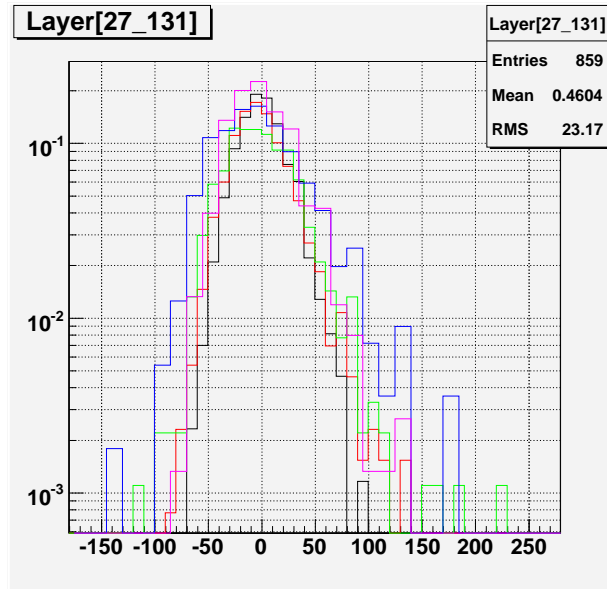
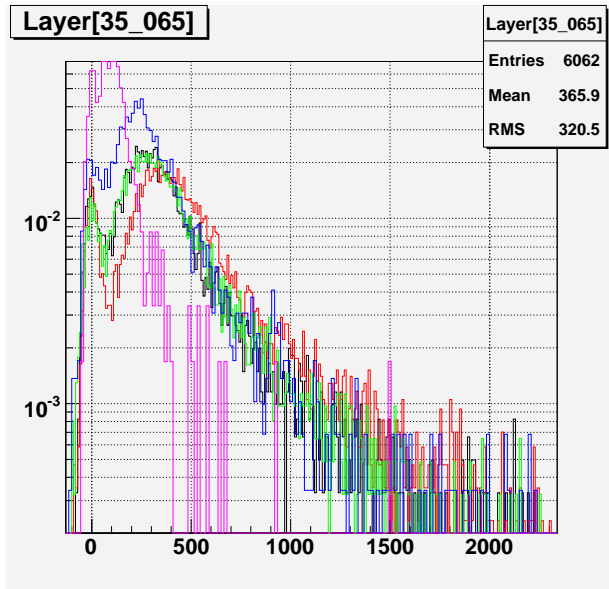
# Some channels: ratio +0.0 / +0.5 is around 1.0



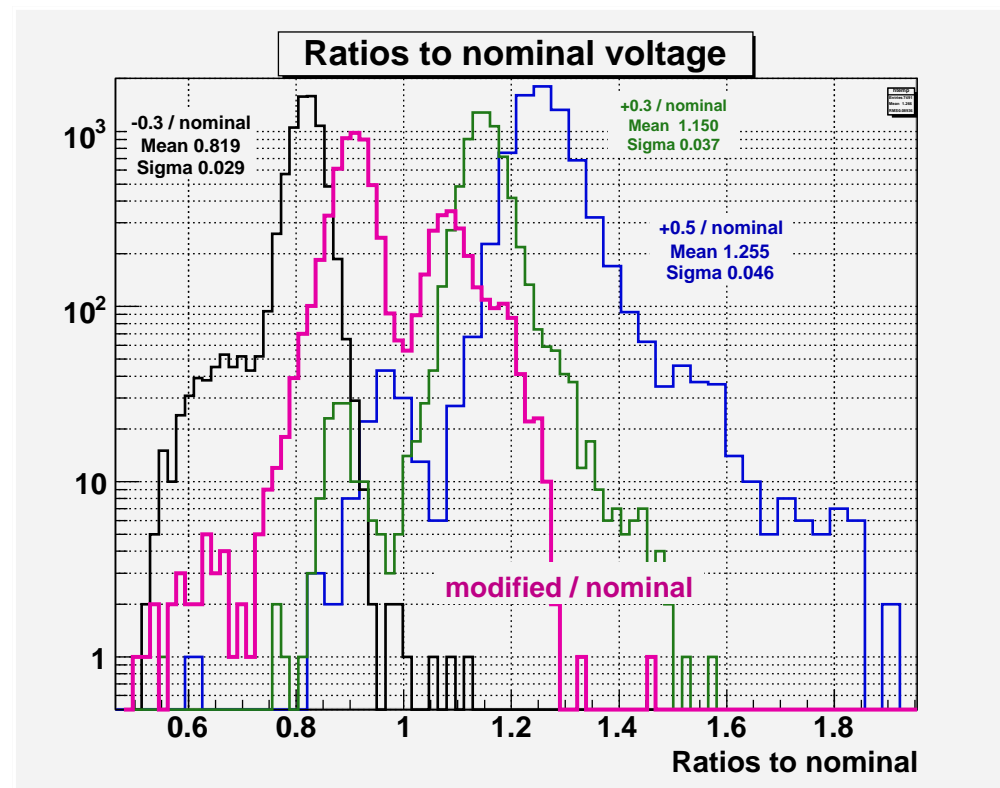
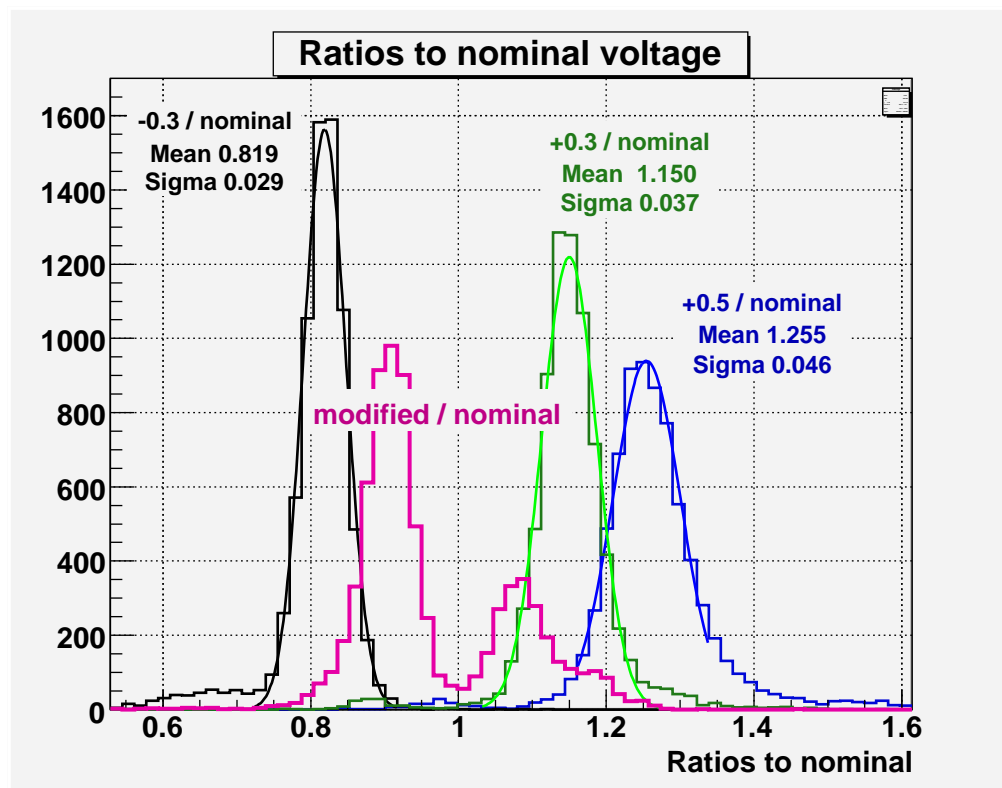
# Some channels: ratio +0.0 / +0.5 > 1.0



# Some bad channels



## Let us look at the ratios



What does it mean?

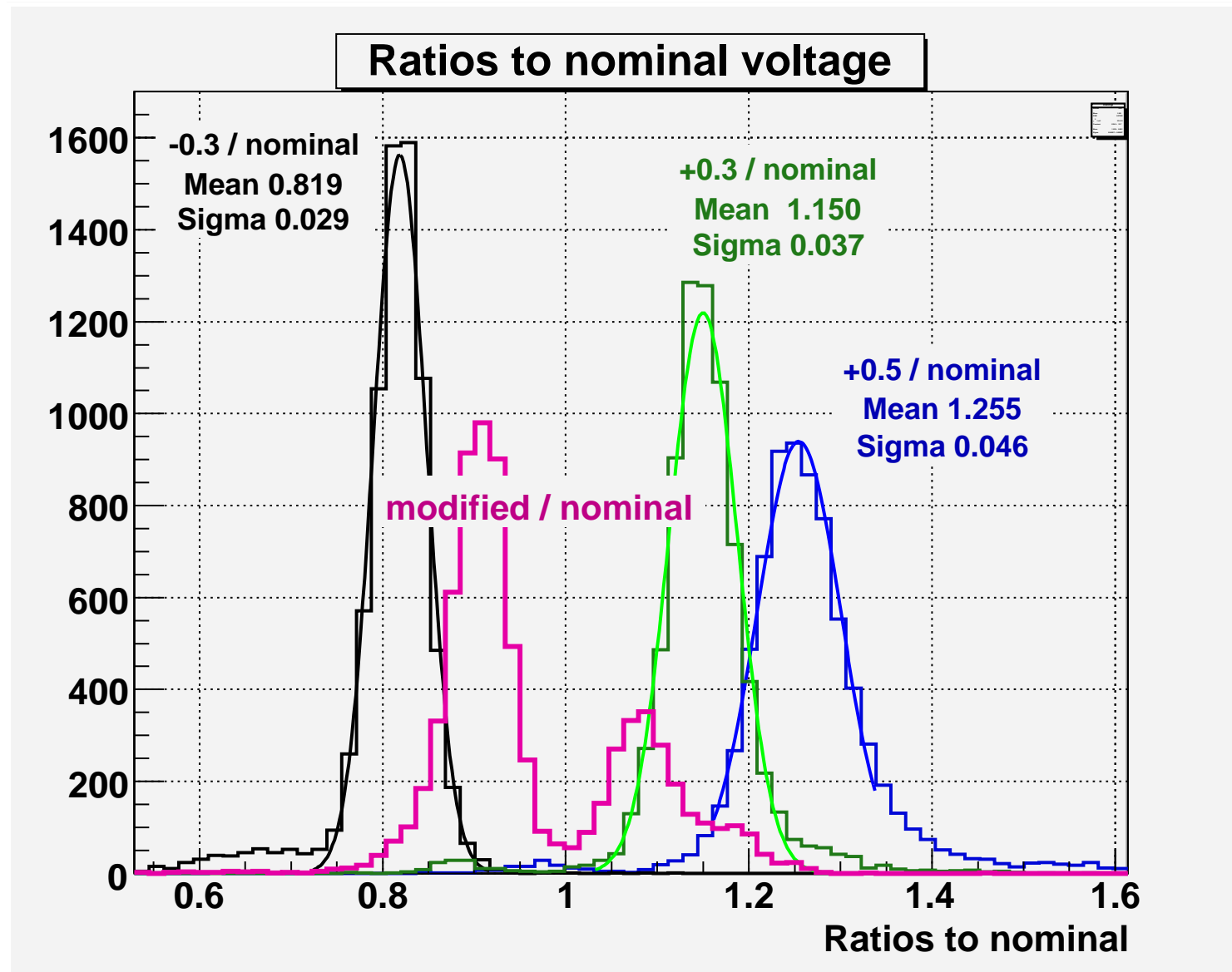
Fit can make mistake, but no so often; and it cannot create structures in ratios.

Voltages for some SiPMs were not set correctly? DAQ or DAC ???

Why modified set of voltages does not fit to any chosen (+0.3, +0.5, nominal) ?

**Calorimeter Temperature ?**

# Support



# Support

