TestBeam Analysis

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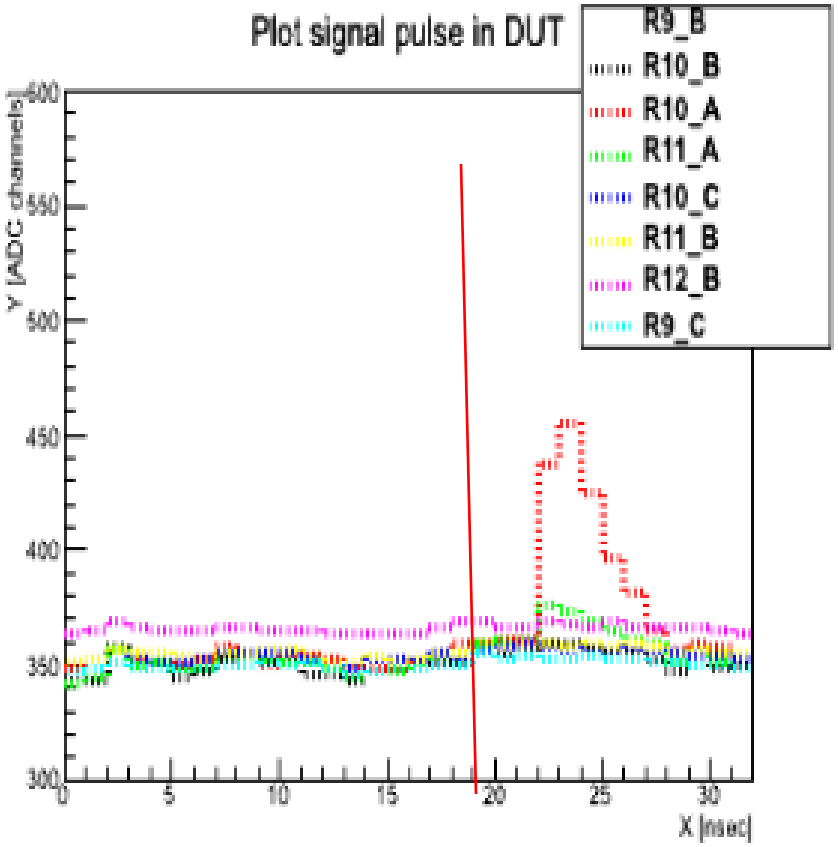
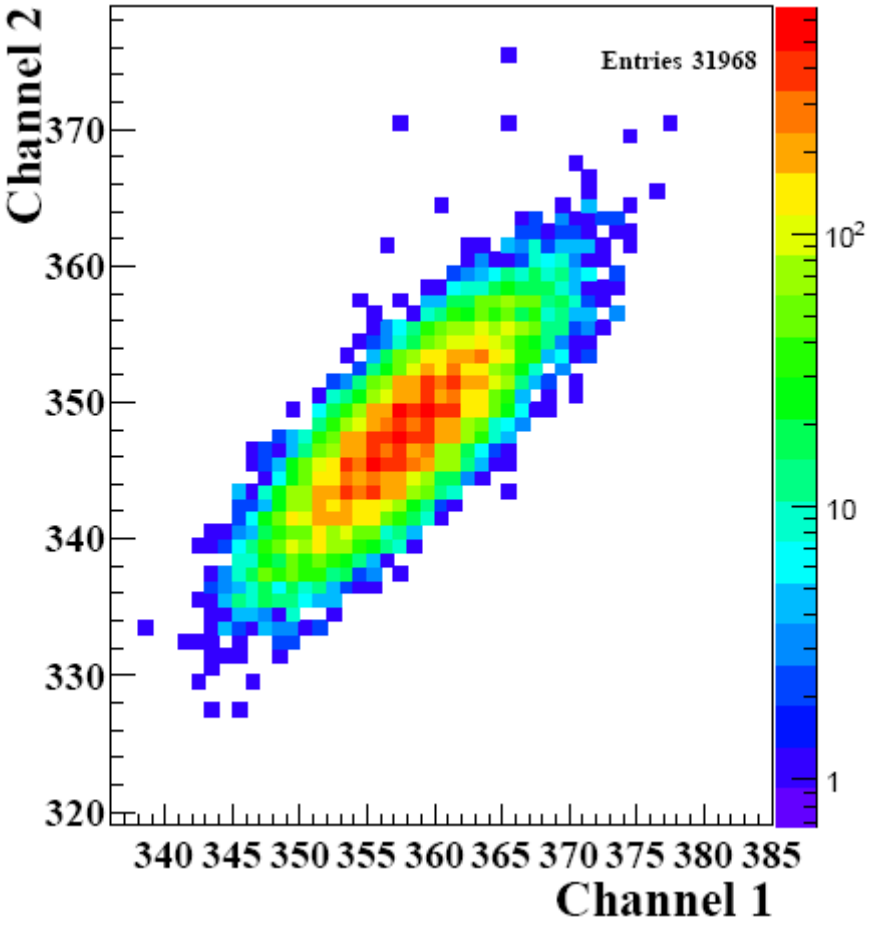
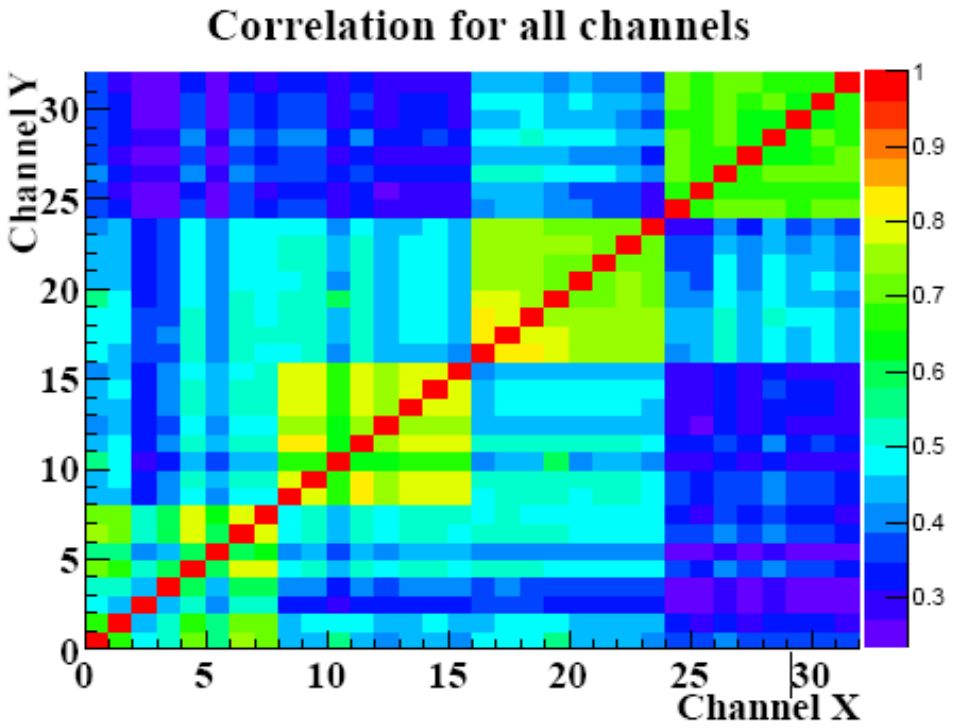
Analysis of the noise
Only Cracow ADC's
First 20 samples (signals coming after 21 sample)



Correlations

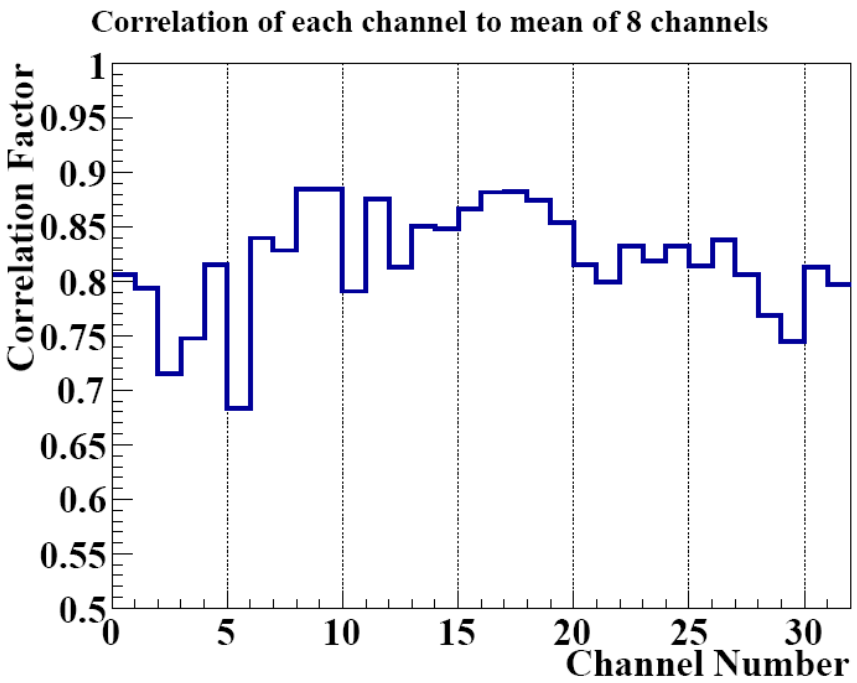


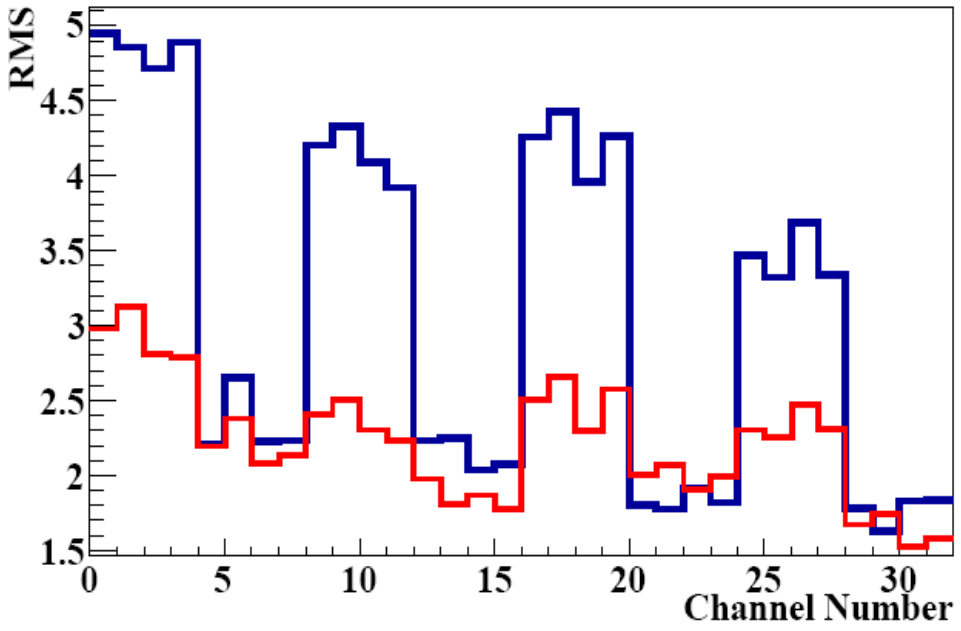


Correlation factors for Cracow ADC data analysis of 32 channels

Correlation factors were calculated by formula:

$$r_{xy} = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 \sum (y_i - \bar{y})^2}}$$



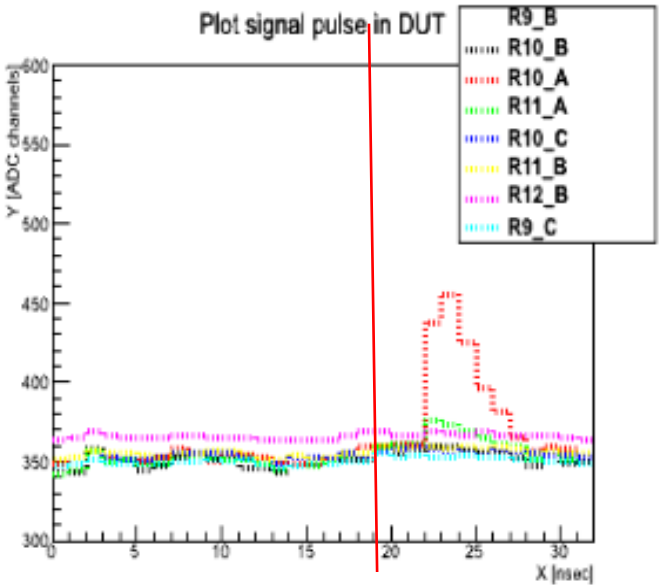


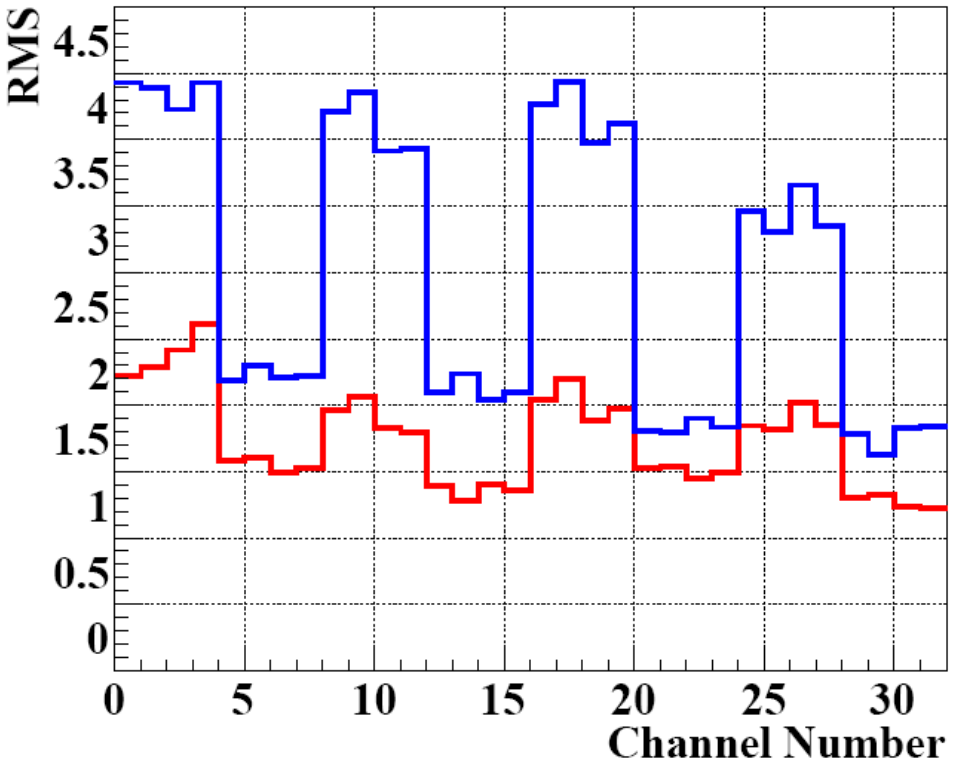
Correlation between each channel and averaged value of 7 other channels

Blue – pedestal RMS
Red – Pedestal – averaged value of each 7 channels values for each sample.

Method

1. 10000 triggers for pedestal calculation for each sample
2. After 10000 – calculation for each sample averaged value of each 8 channels – CMN
3. Subtraction for each sample pedestal and CMN – Fill histogram
4. RMS of each channel histogram shown as Red color





Blue – pedestal RMS
Red – Pedestal – averaged value of each 8 channels values for each sample.