

Analysis of TTS with V1742/DRS4

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2 August 2023

Laser light on Ch11
Laser Sync on Ch13
Laser Sync on Tr0 and Tr1

Voltage: 100/850/200/850/100

Trigger rate: 300 Hz

finally I had some time to look on your last SPE data for TTS study of our tile N.153.

First of all we have about 310 events in ch11 over 10169 triggers.

ADC and QDC spectra are good - adc_ch11.png and qdc_ch11.png

with about 20 mV threshold mean ADC=85 mV and QDC=0.33 pC;

The difference between ch13 and TR01 (both are copies of the logical trigger pulse) is very narrow - RMS=6 ps, consistent with Bologna timing calibrations. - dt_ch13_ch11.png

The time difference between trigger and ch11 in two forms:

dt_tr01_ch11.png - here TR01 signal is used

dt_ch13_ch11.png - here ch13 signal is used

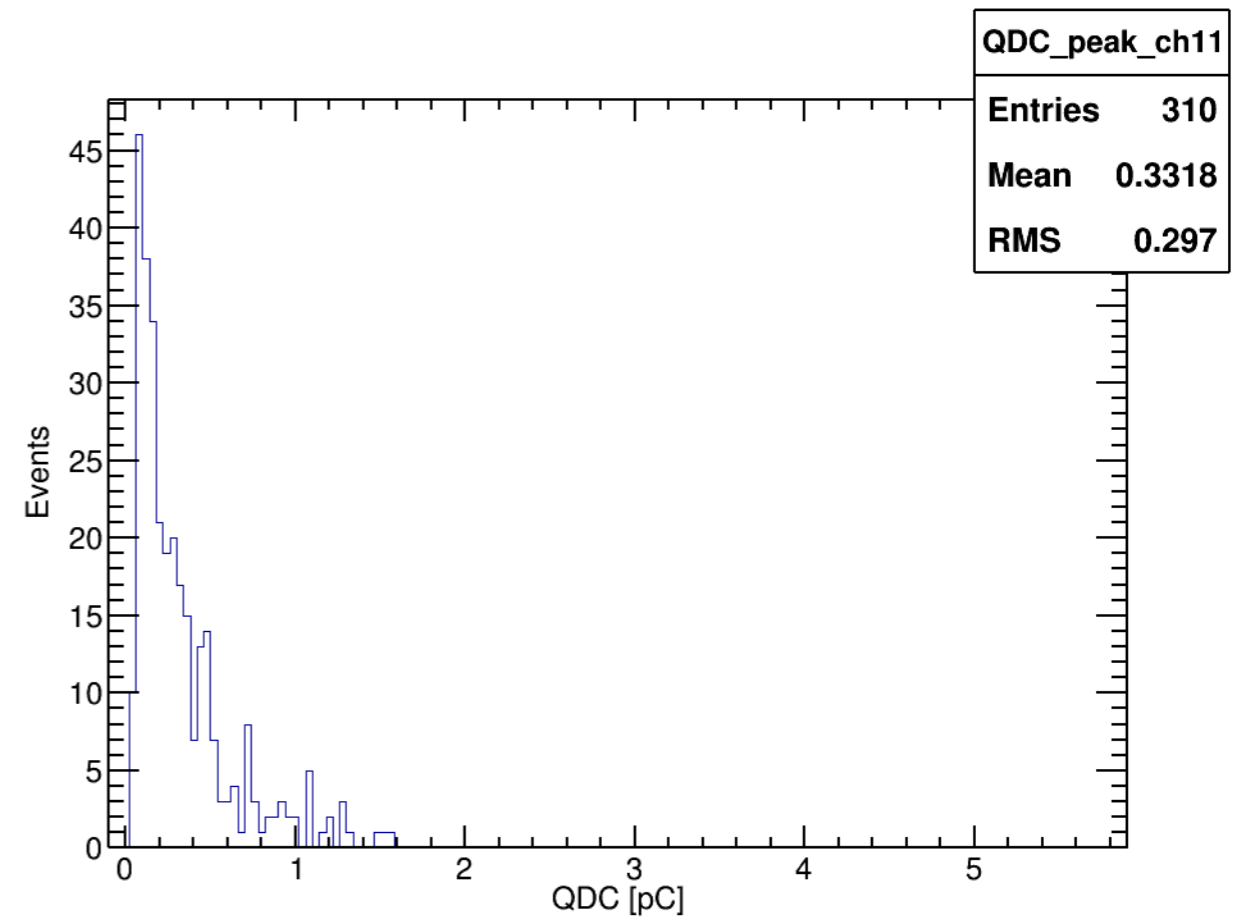
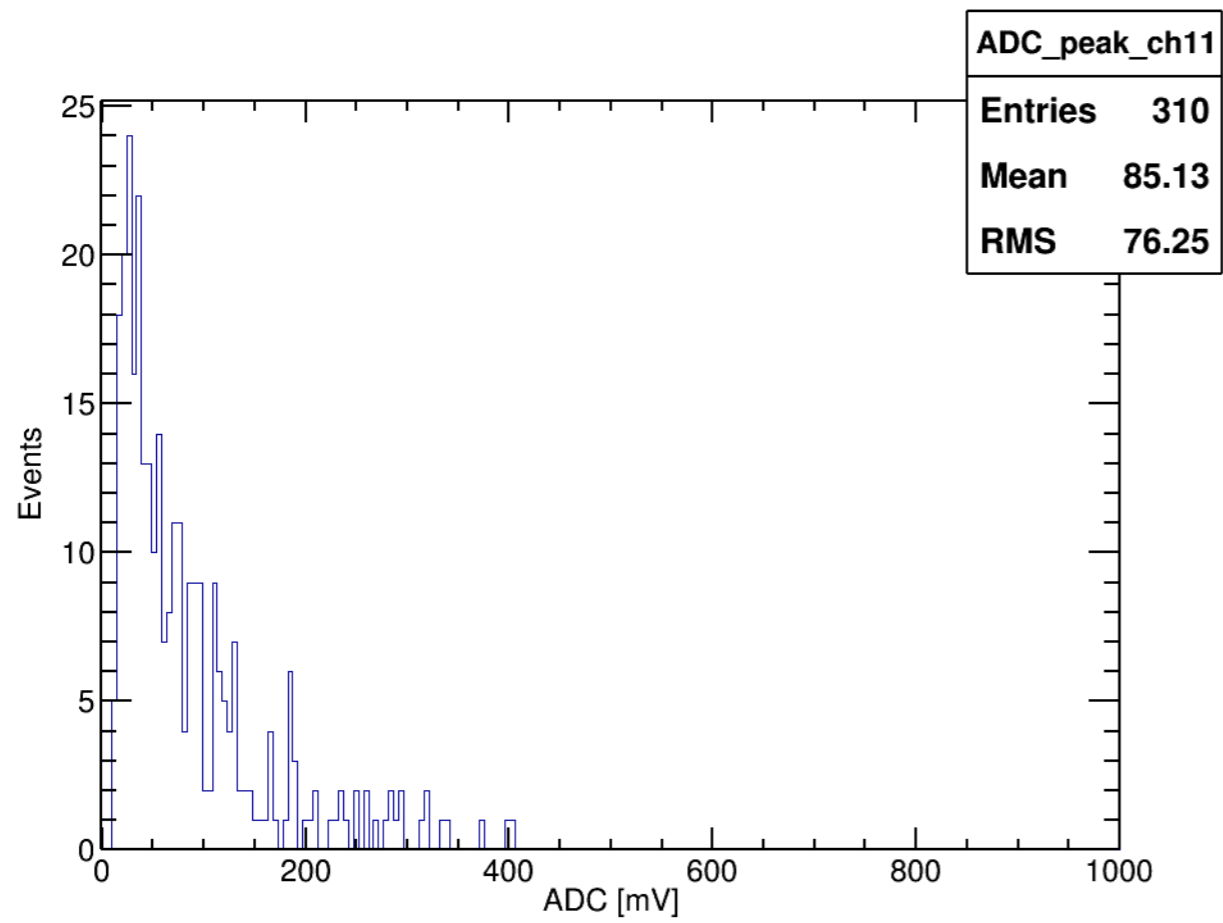
give similar results with RMS=117 ps +/- 7 ps. This is for the 20 mV threshold. And given the ADC spectrum, the part <ADC<50 mV dominates.

But plotting timing RMS vs. ch11 ADC: dt_tr01_ch11_adc.png we can see that >50 mV the resolution drops to 70 ps.

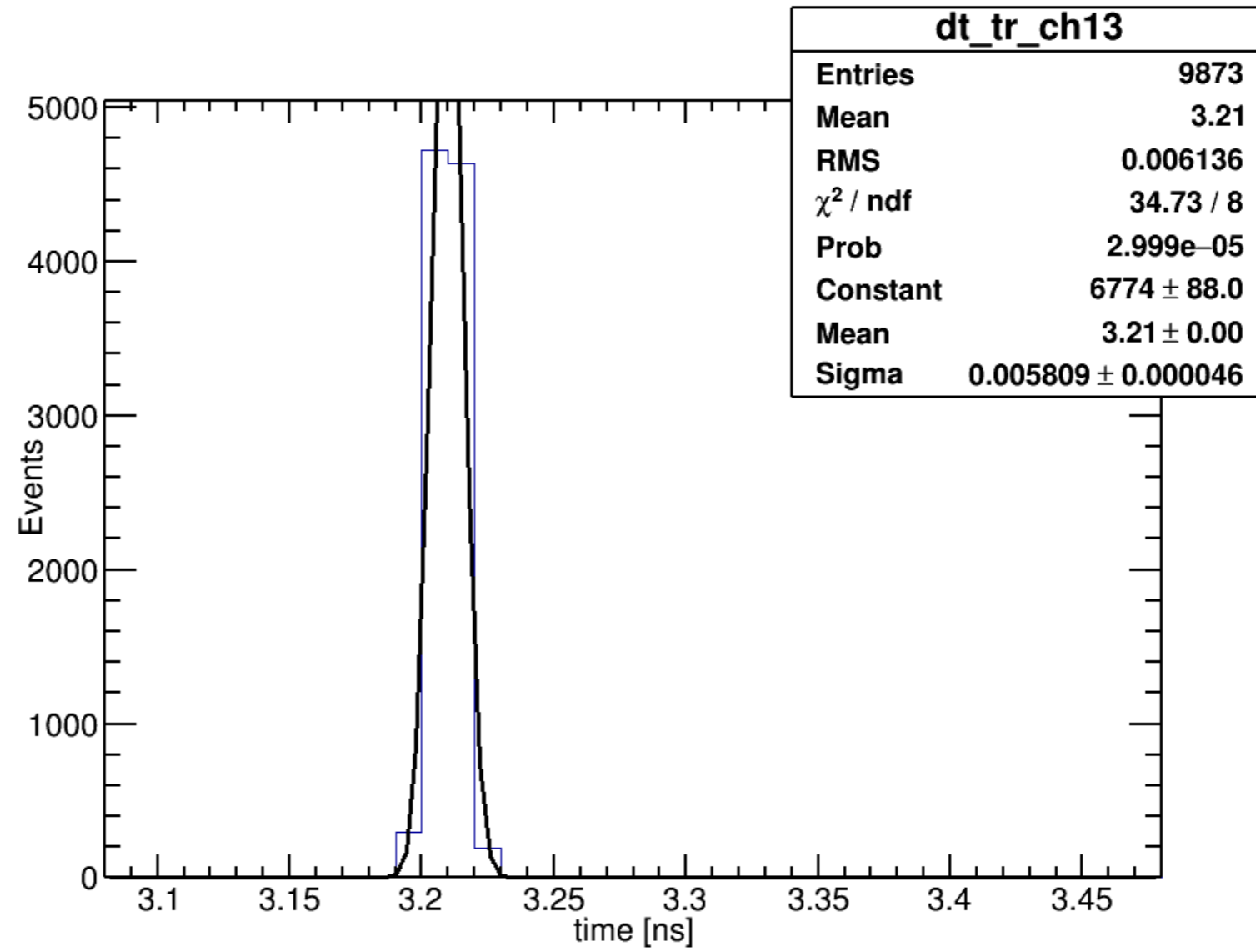
(although the statistics is a bit low for this 2D study).

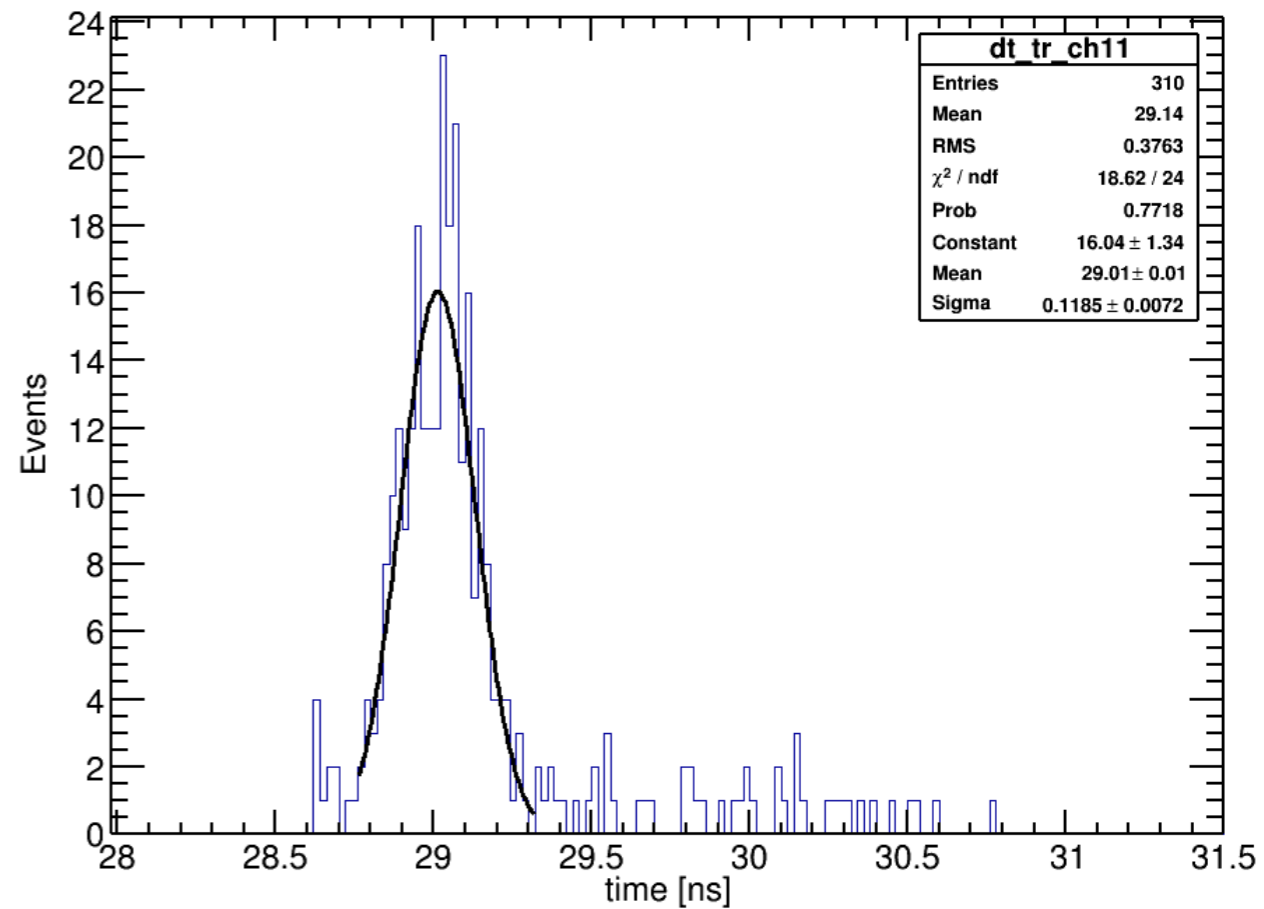
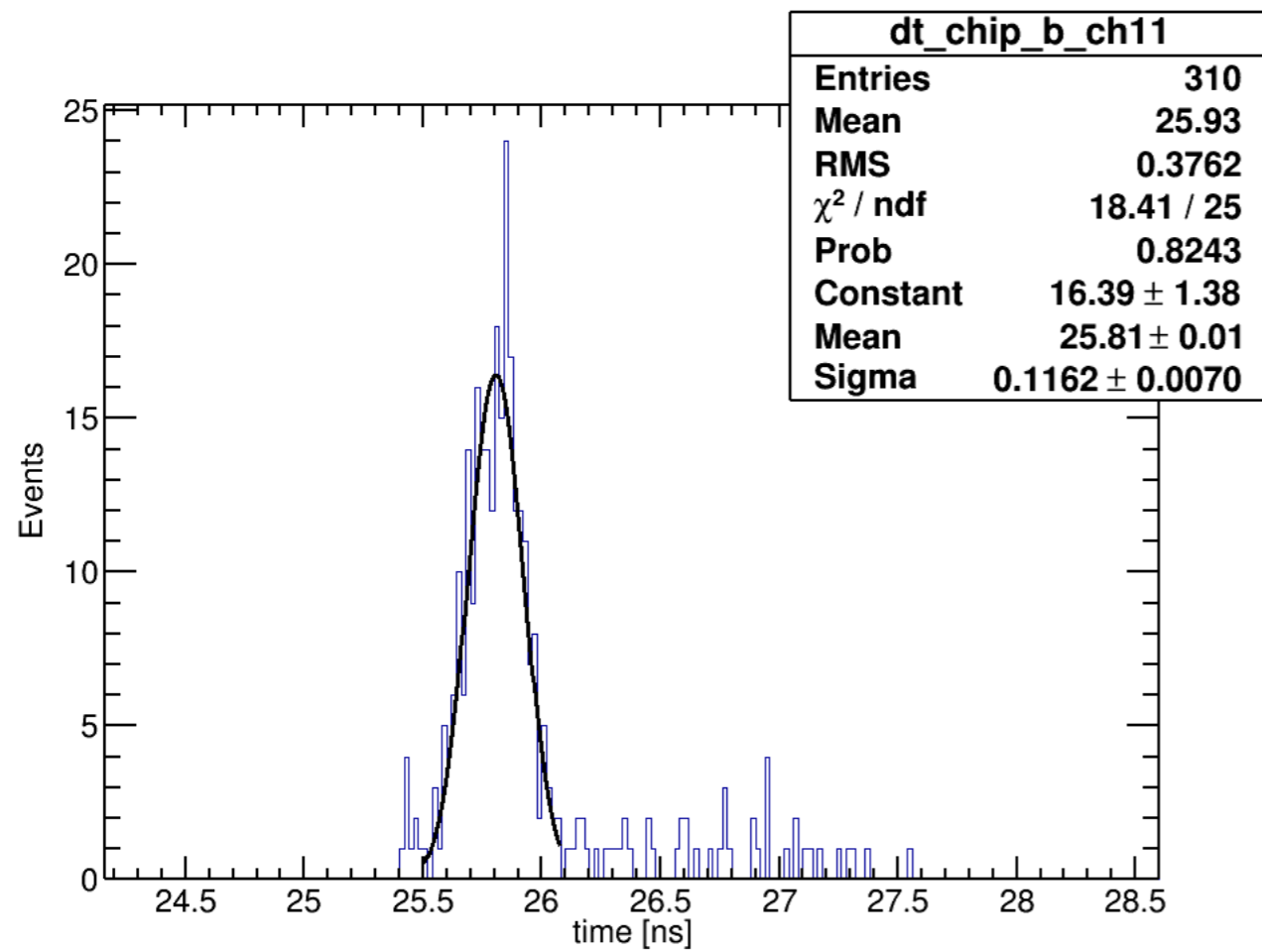
I don't remember which threshold have you used? And which resolution have you got from oscilloscope?

Best Regards,



Confirms Bologna





Ch 11

