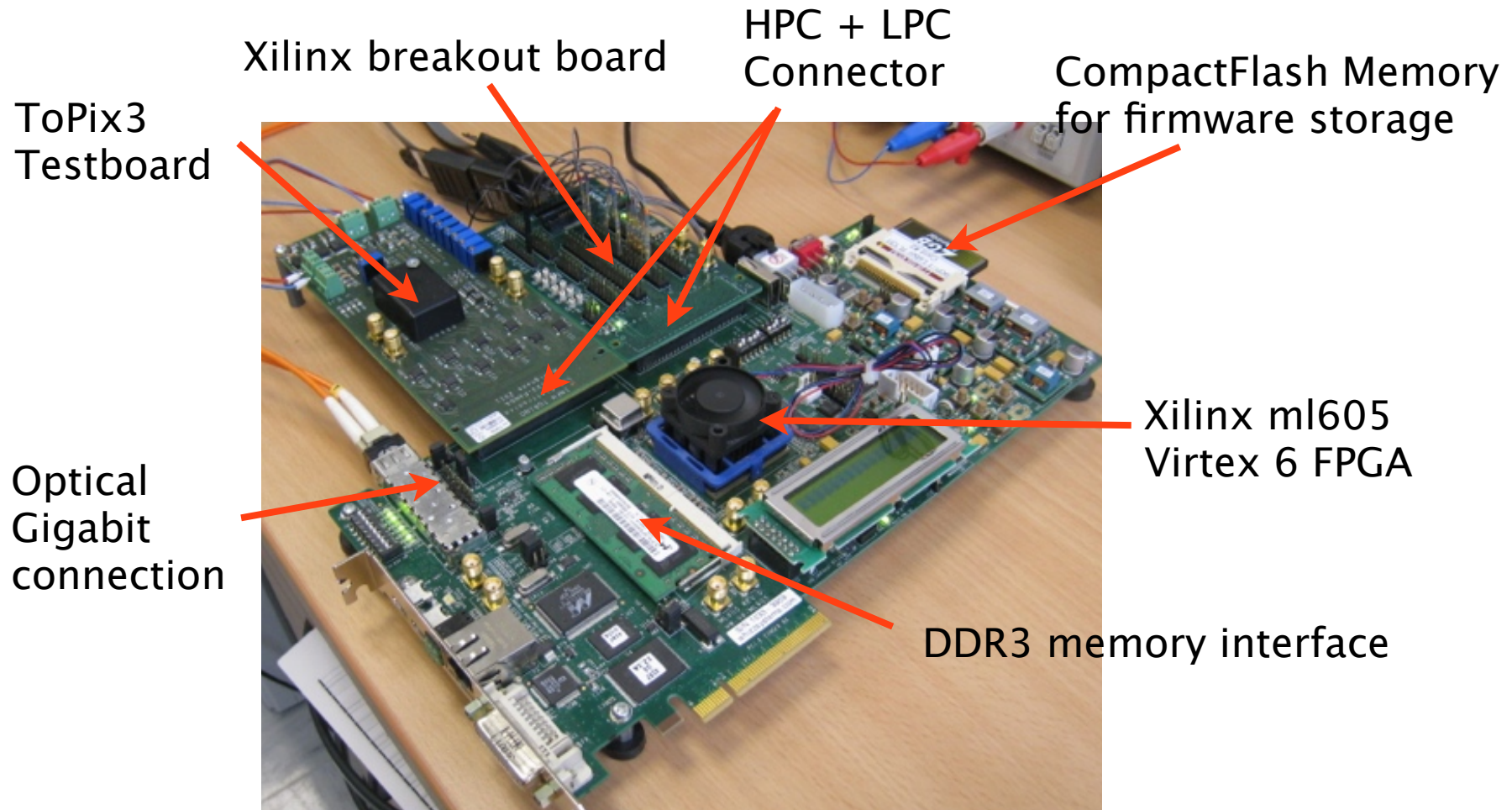


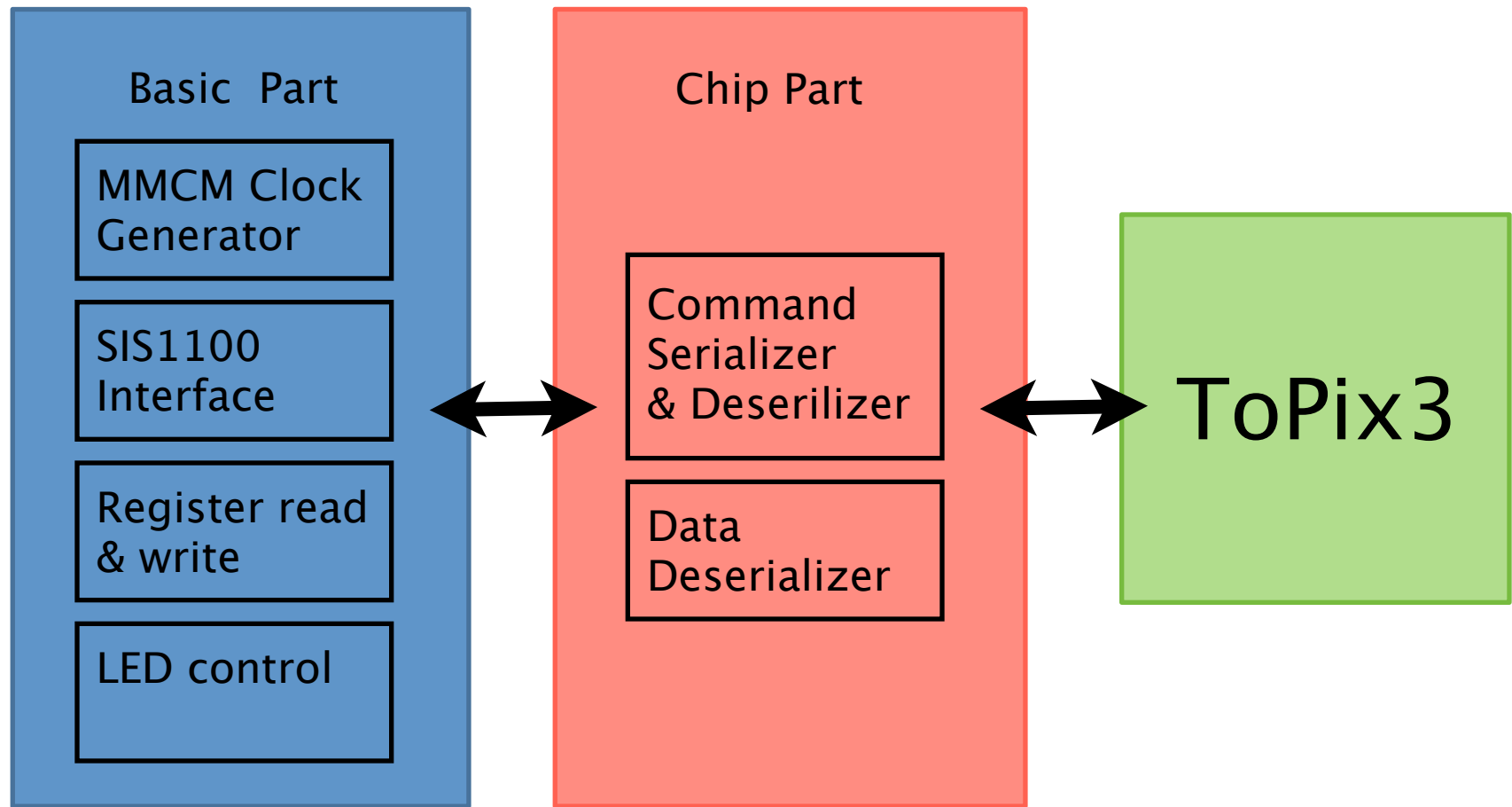
# Readout of ToPix3 with the Jülich Digital Readout System

5. March 2012 | Simone Esch [e.esch@fz-juelich.de](mailto:e.esch@fz-juelich.de)

# Jülich digital readout system

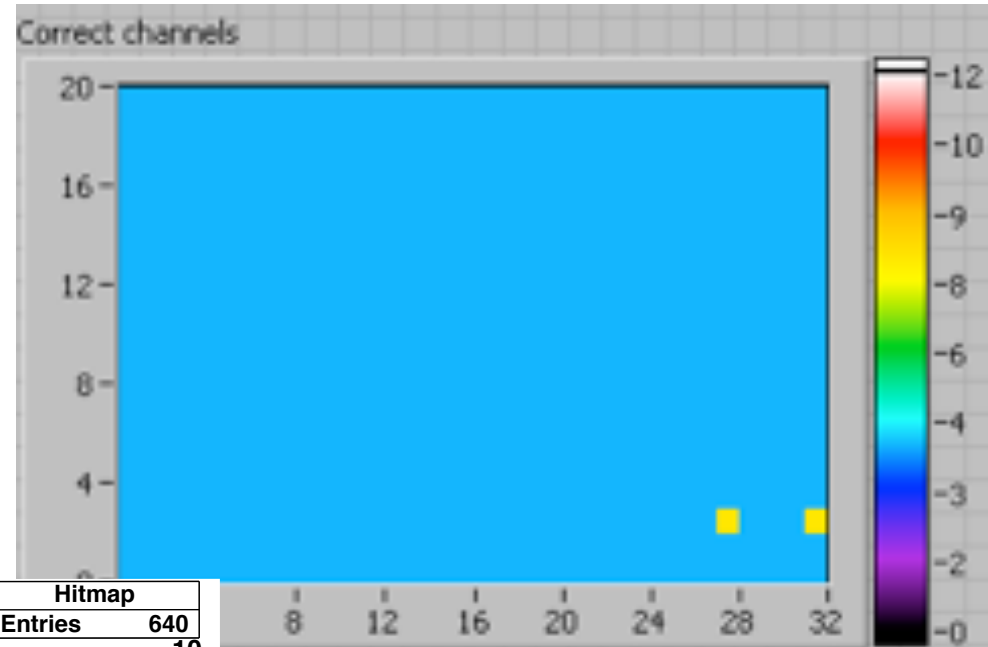


# Jülich digital readout system



# Pixel check

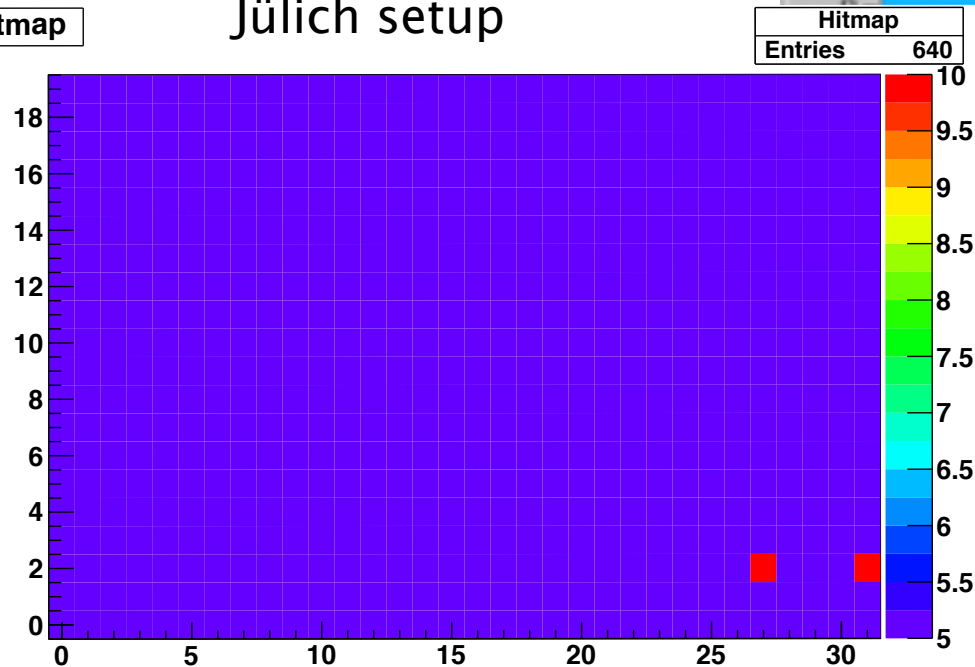
Inject n times in a pixel and readout



Torino setup

hitmap

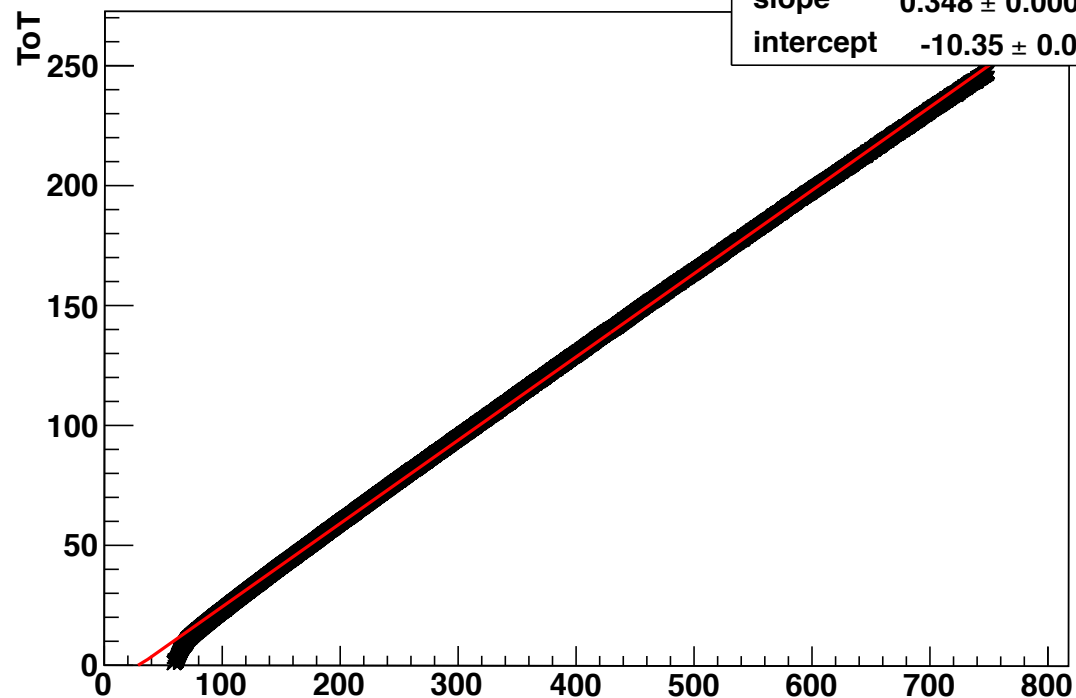
Jülich setup



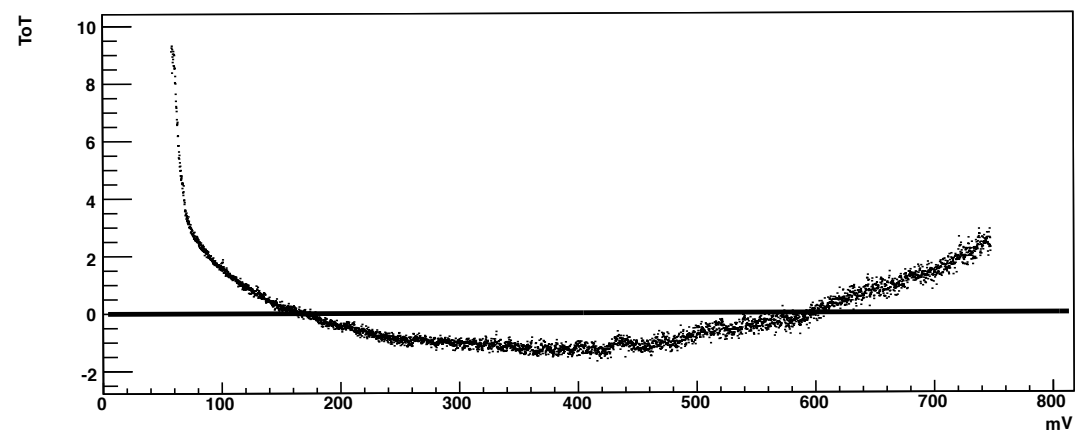
# ToT linearity

ToT linearity pixel 00-0-30

|                       |                       |
|-----------------------|-----------------------|
| $\chi^2 / \text{ndf}$ | 7204 / 3678           |
| slope                 | $0.348 \pm 0.0001159$ |
| intercept             | $-10.35 \pm 0.05217$  |

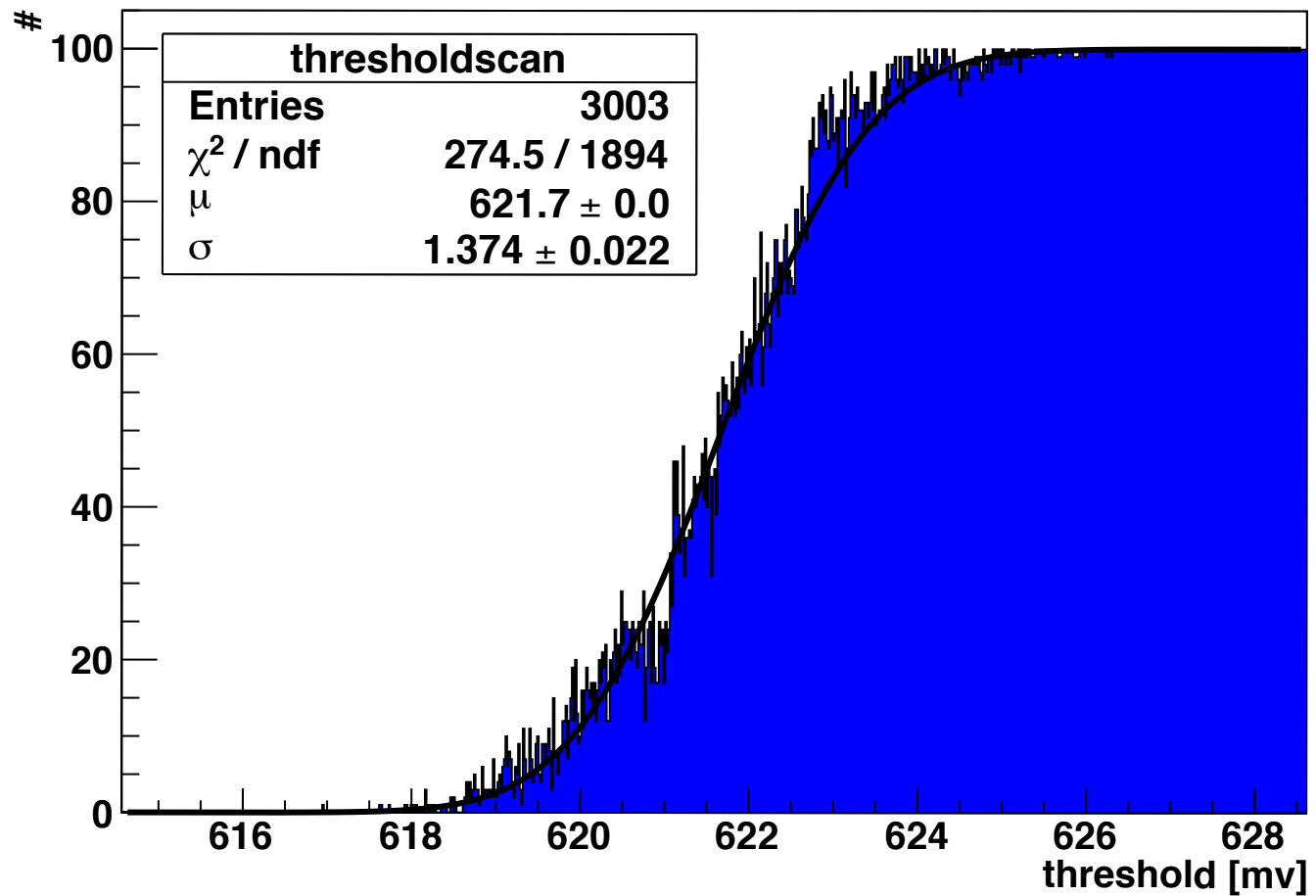


Nonlinearity



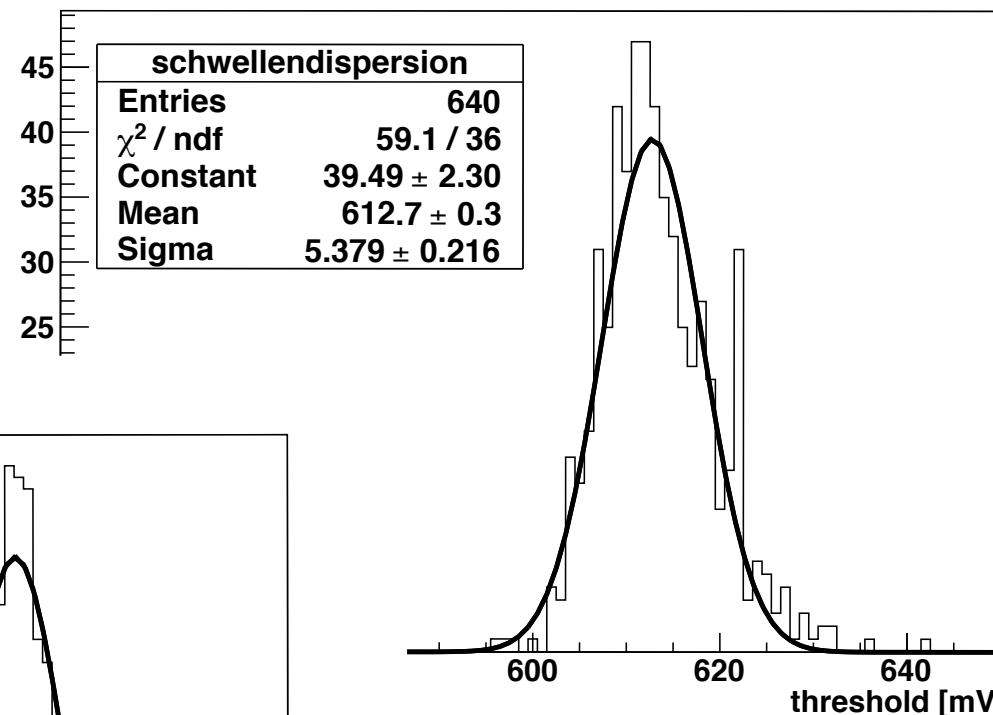
# Threshold scan

ToPix 3 - board4, cal\_level: 50 mV, pixel: 00-0-30, 100 Injections

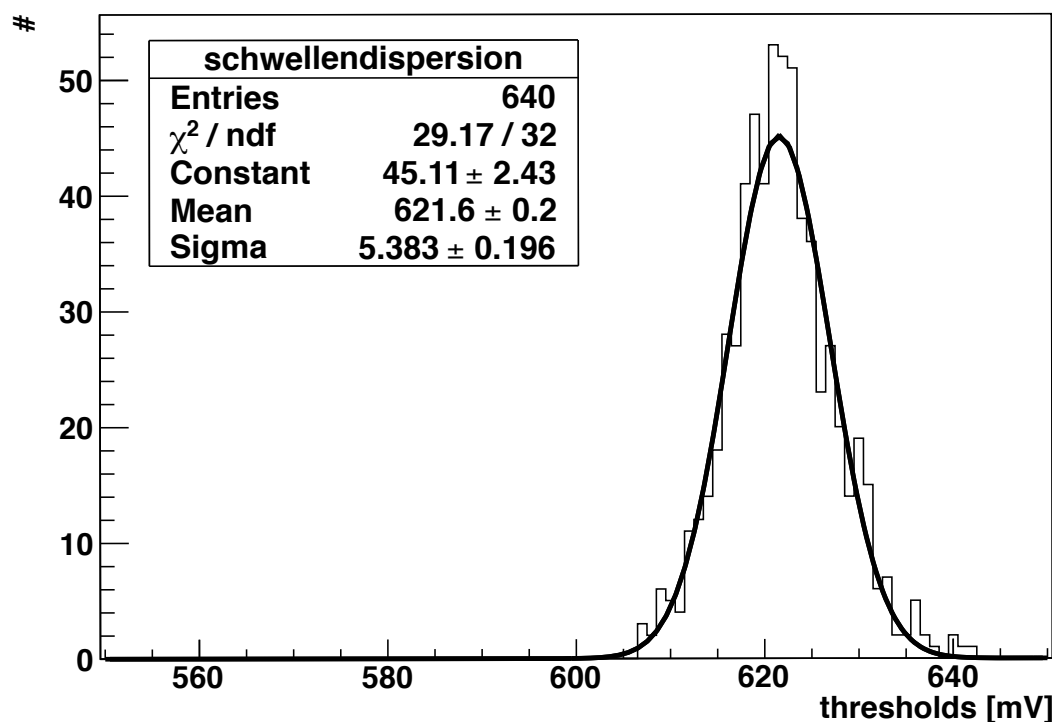


# threshold dispersion - juelich setup

## Threshold dispersion



# threshold dispersion - turin setup



## Summary/Outlook

- Jülich digital readout system is working
- Measurements with ToPix3 have been done

My next steps:

- Implementation of GBT based readout of ToPix3

General next steps:

- Further measurements of ToPix3
- Measurement of time resolution of ToPix3
- Implementation of ethernet based protocol MRFoE

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**Thank you for your attention**