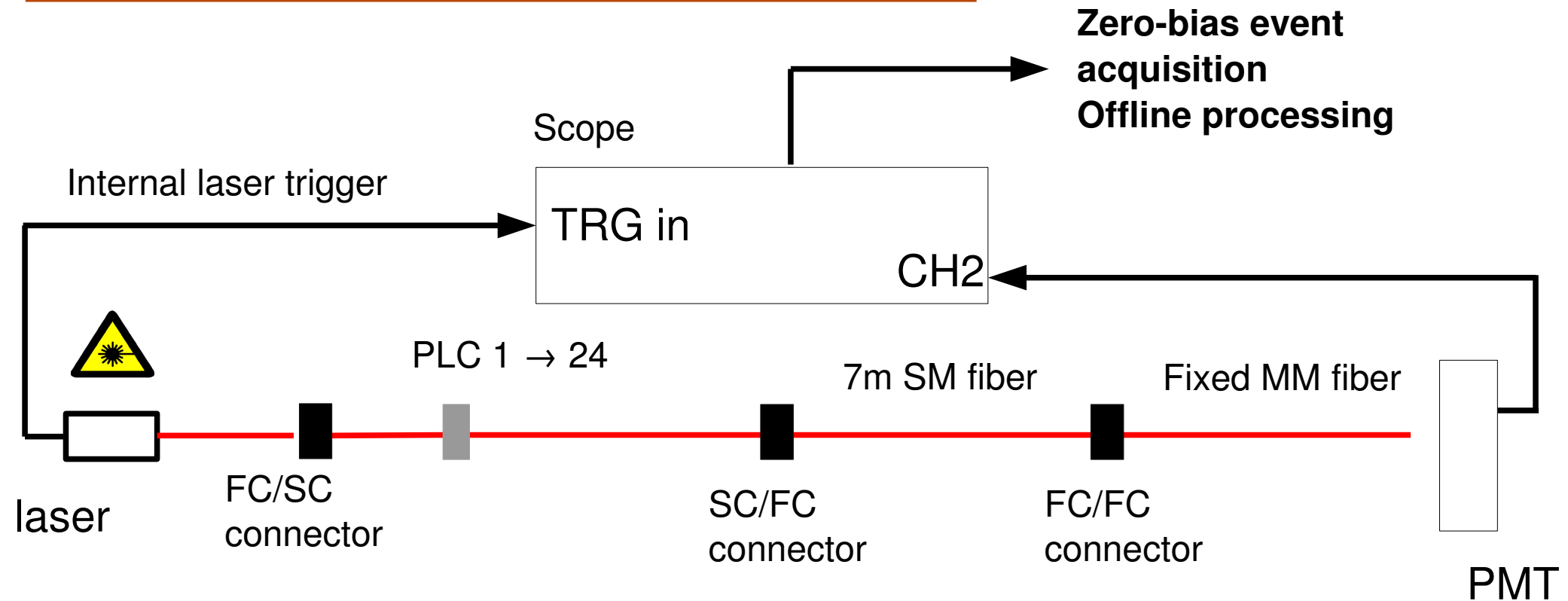


Time resolution and piping efficiency of the PLC

Setup



Normalization sample:

The PLC is removed from the chain

Light yield measurement:

Photon counting

Light spot shape

24 channels seen by CCD

CH 24



CH 4



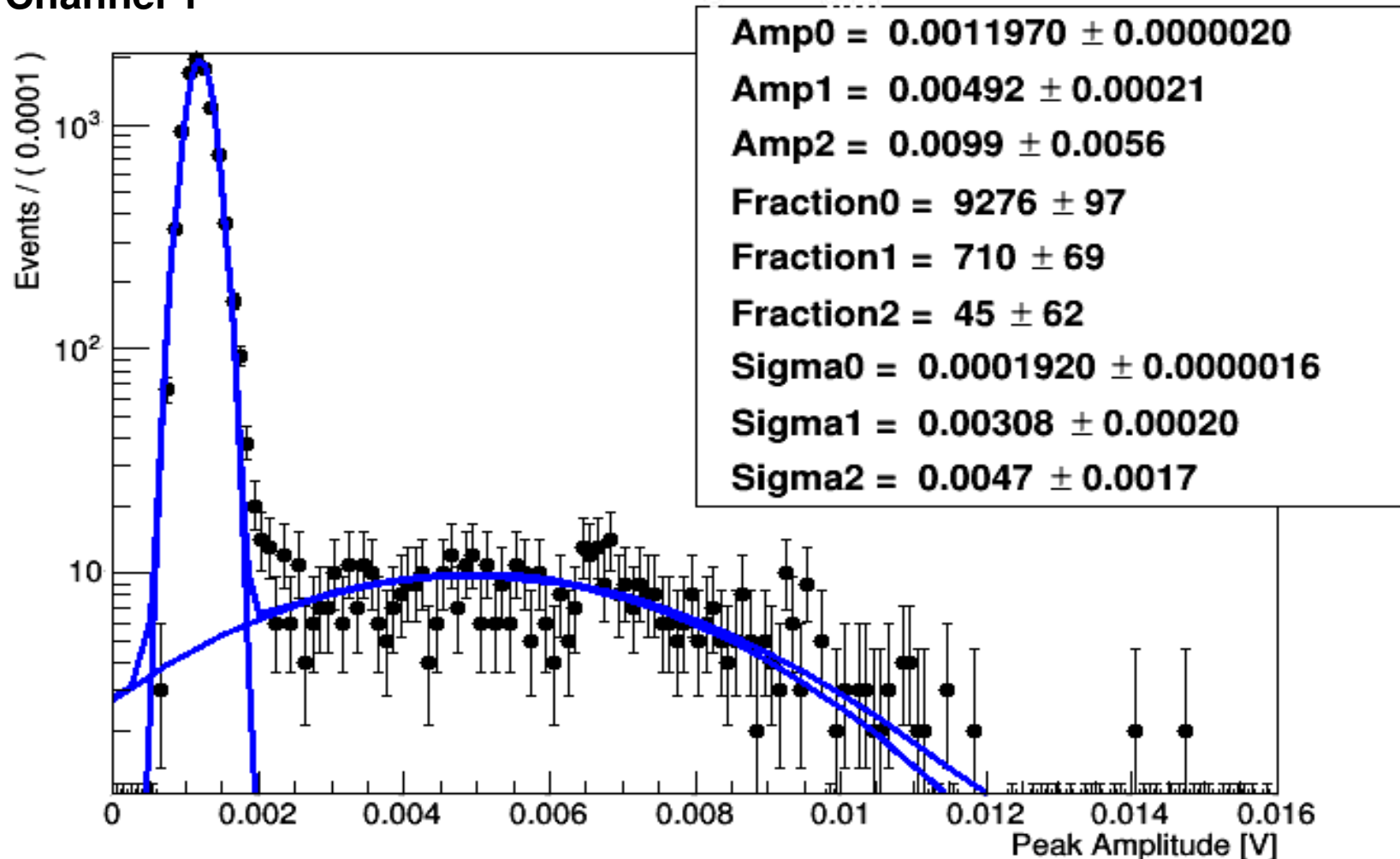
Spots are regular an gaussian-like on each channel

Pulse amplitude

We work near the single photon regime

→ We can use the photon counting to estimate the piping efficiency

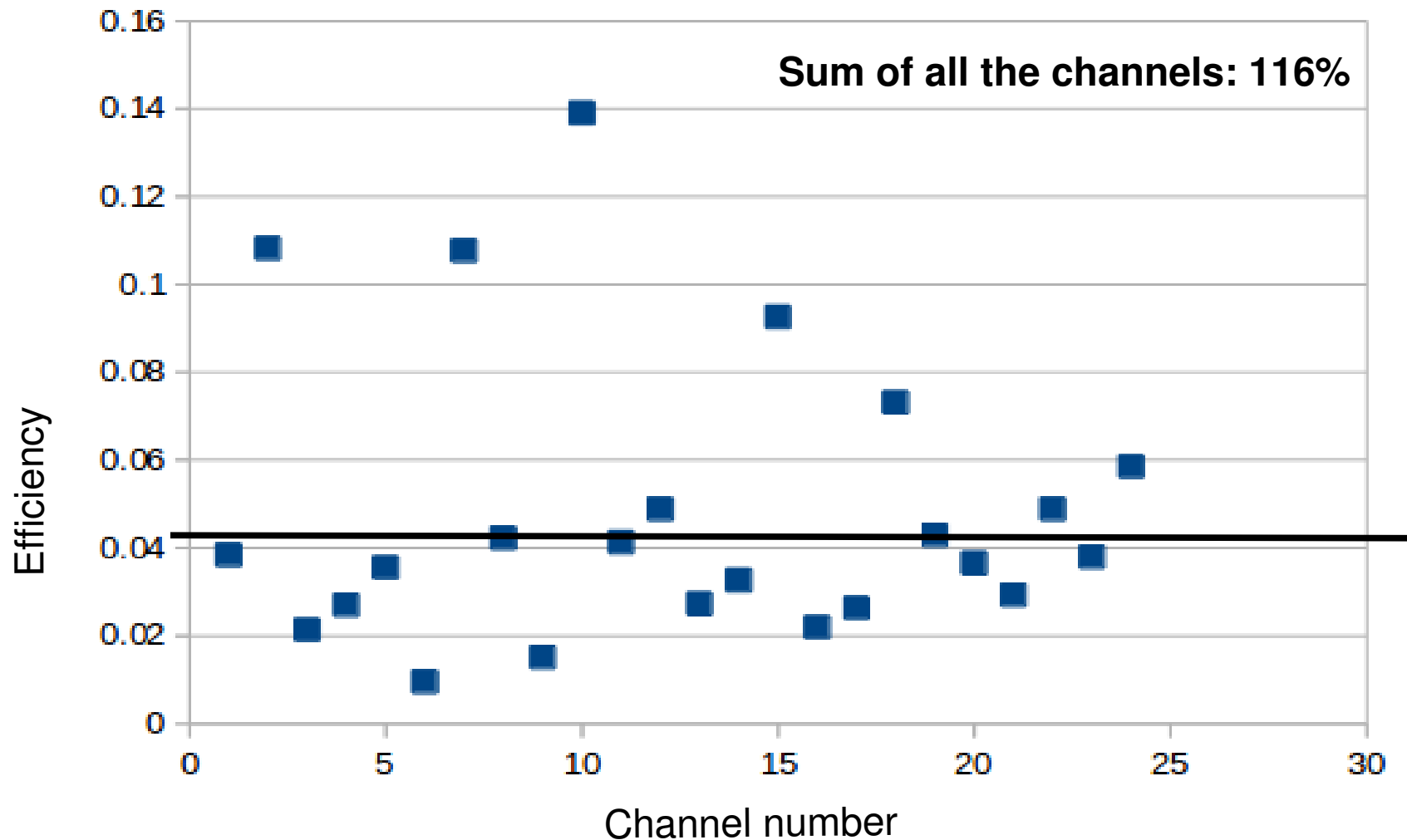
Channel 1



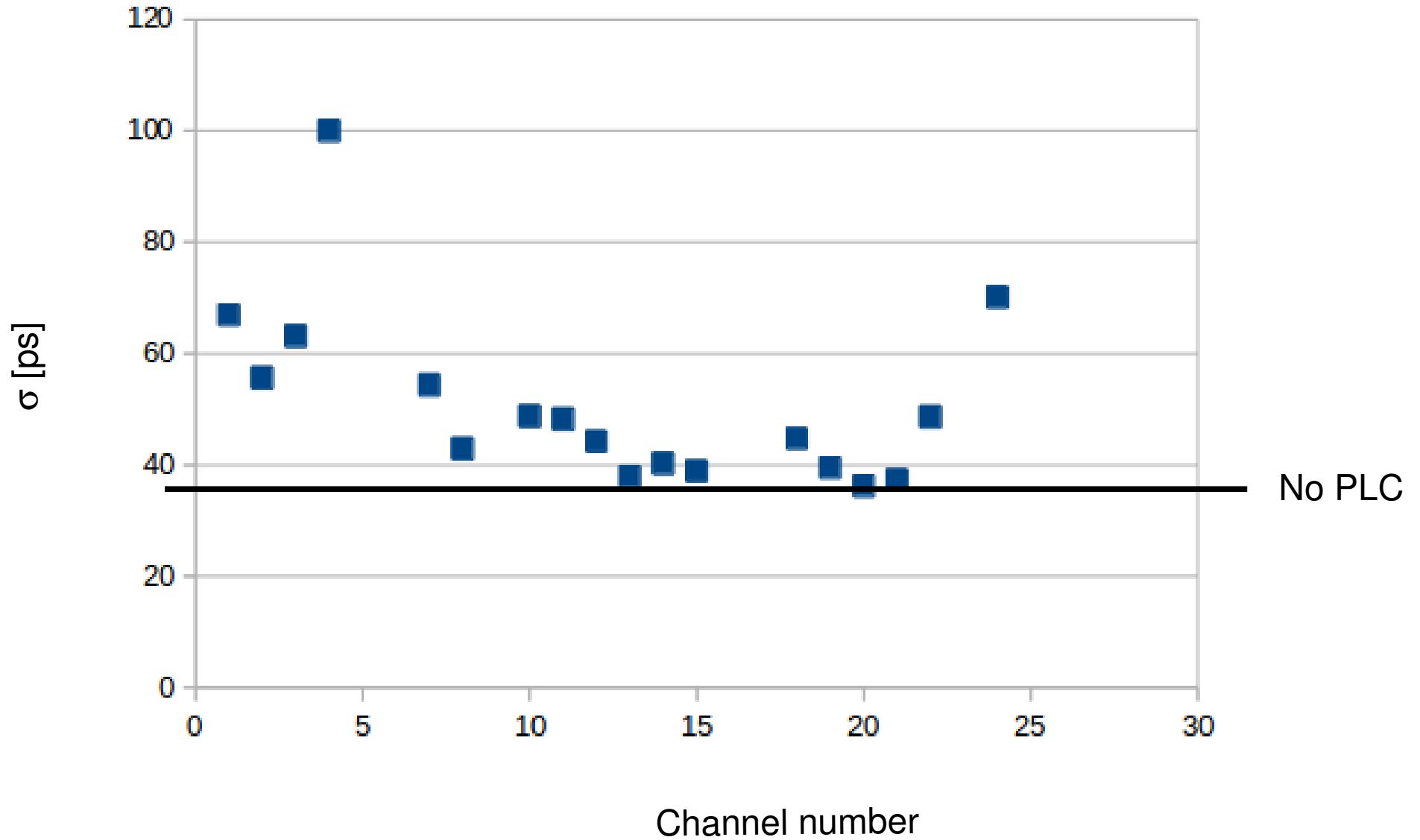
Piping efficiency

Transmission efficiency = Light yield with PLC / Light yield without PLC

- compensate for laser effects
- compensate for PMT gain variation
- compensate for temperature and other environmental effects
- **Should be approximatively 1/24 (0.041)**



Time resolution with PLC



Time resolution VS piping efficiency

