

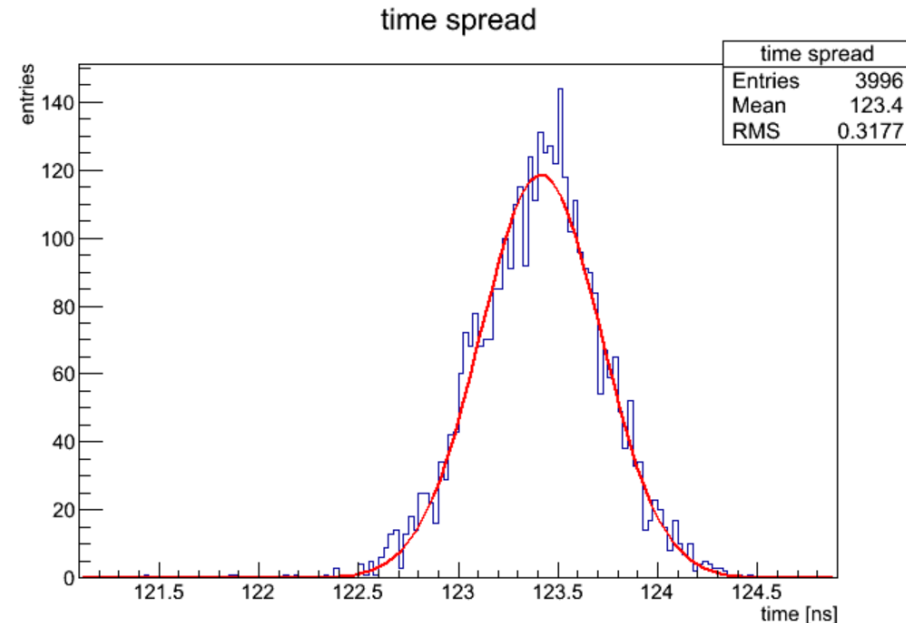
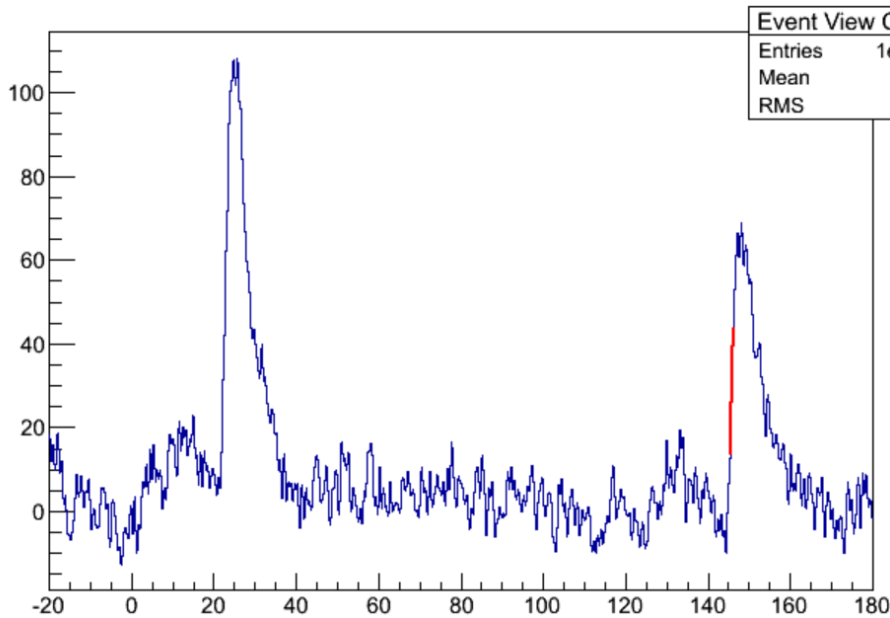
- Infrared laser used, unirradiated strip sensor on the timing board
- 6 Strips connected to readout, neighbors not grounded
- TCT Scan to determine positions, then do timing measurements on certain positions between the strips

2 Pulses, “Self-reference”

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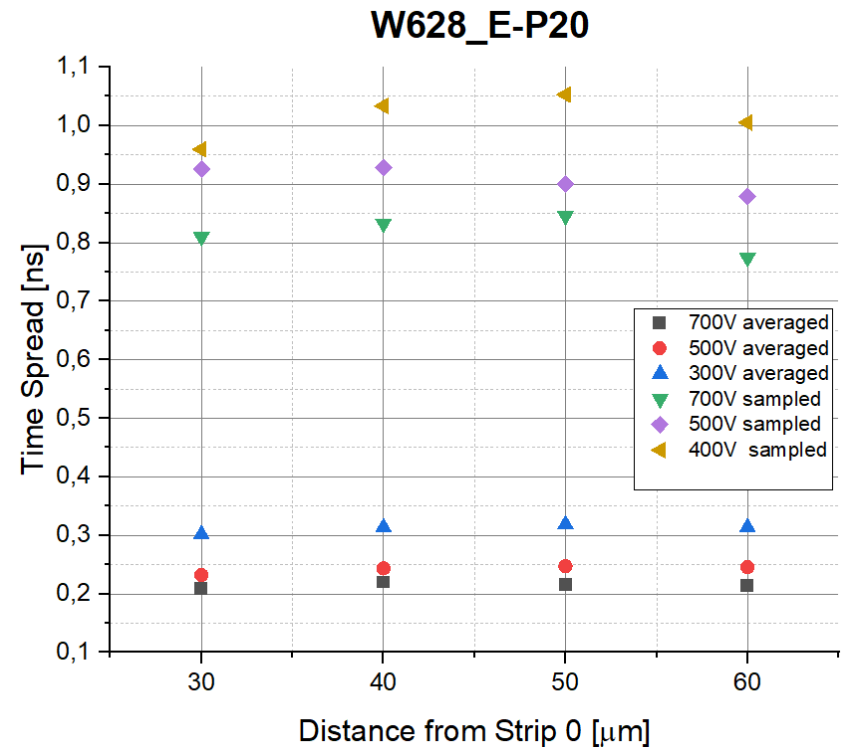
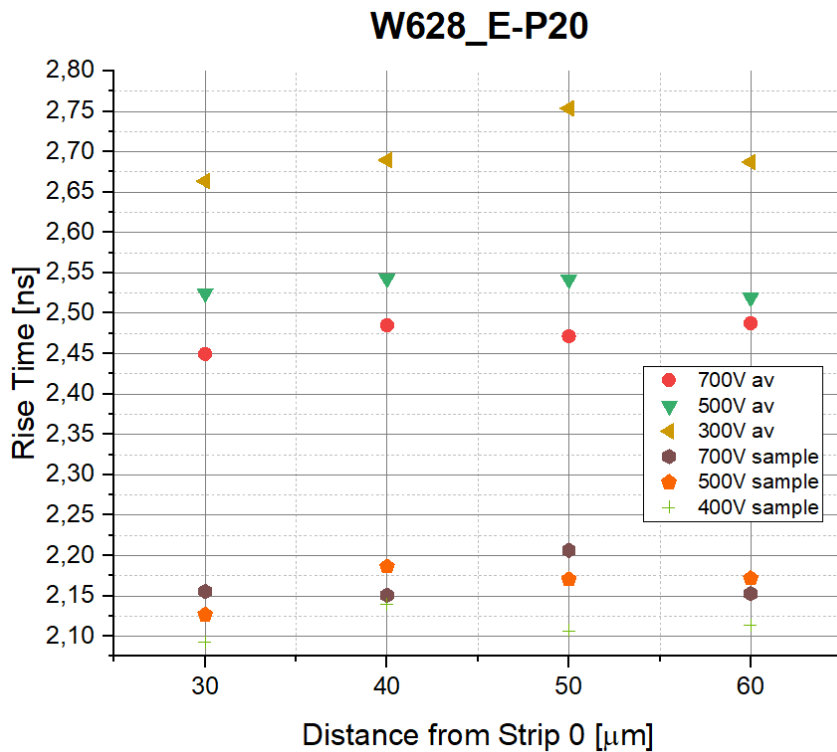


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- Use of a beam splitter and cable delay -> significantly lower signals, difference in signal height (partially fixed now)
- Triggered still by the laser, 20 averaged/ event or sampled

2 Pulses, “Self-reference”



- Voltage dependence as expected
- Small position dependence – more pronounced for lower voltages
- Values seem to be in the expected range

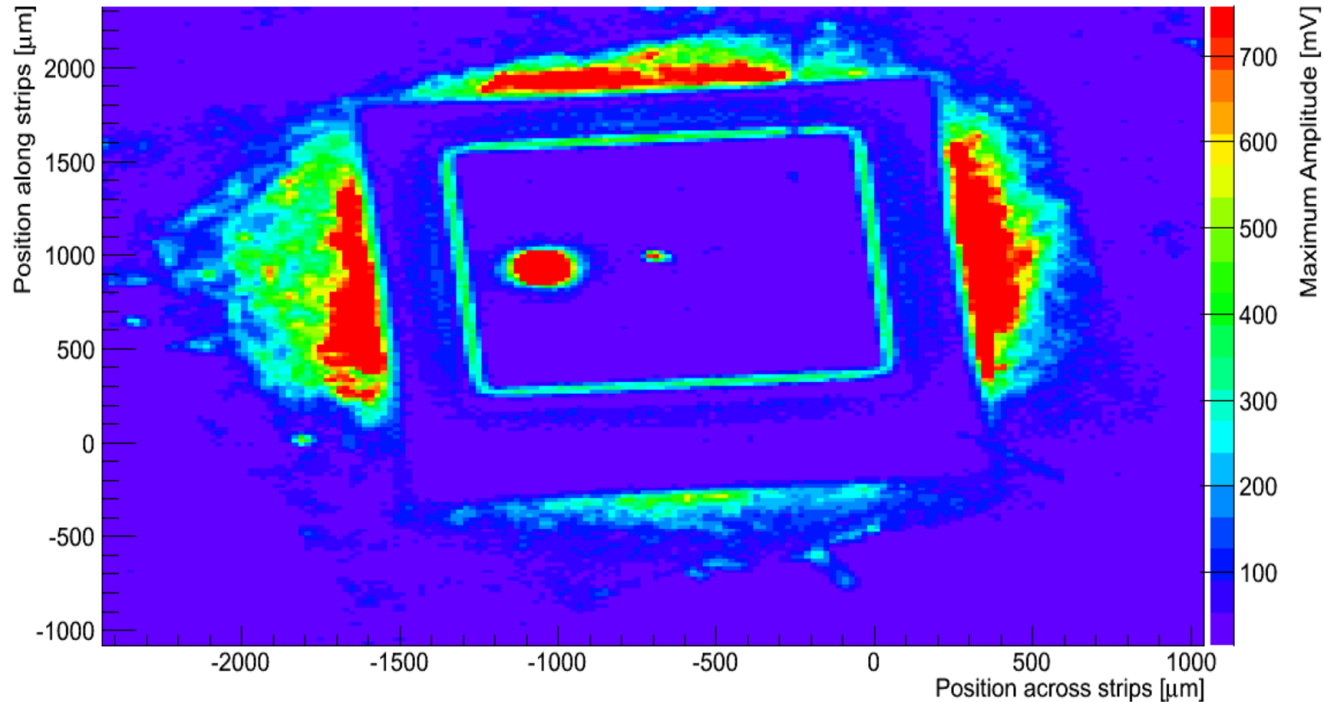
LGAD, comparing different measurements

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LGAD, 50 μ m thickness

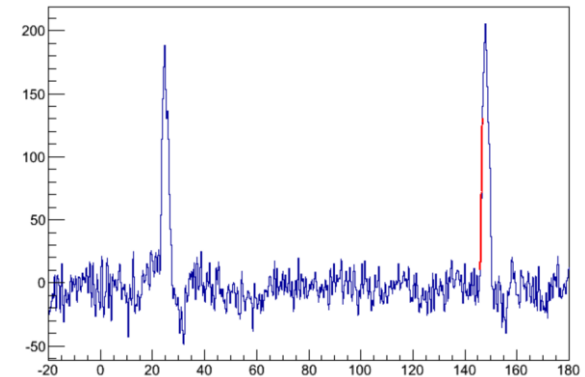
TCT scan showed some interesting features of the used glue

Timing measurements in the opening then

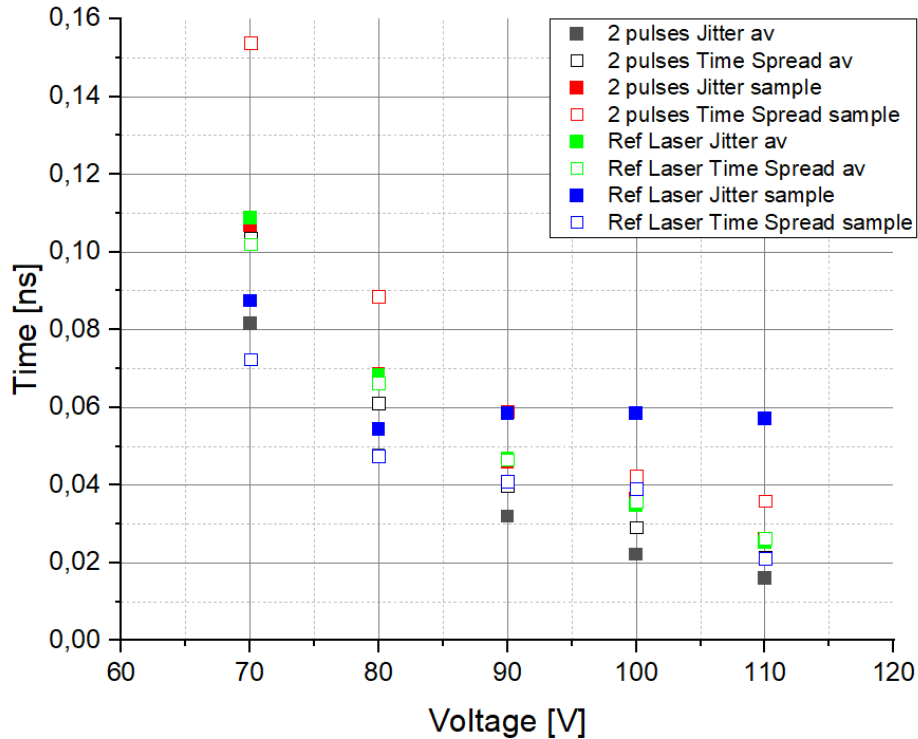


4 Types of measurements:

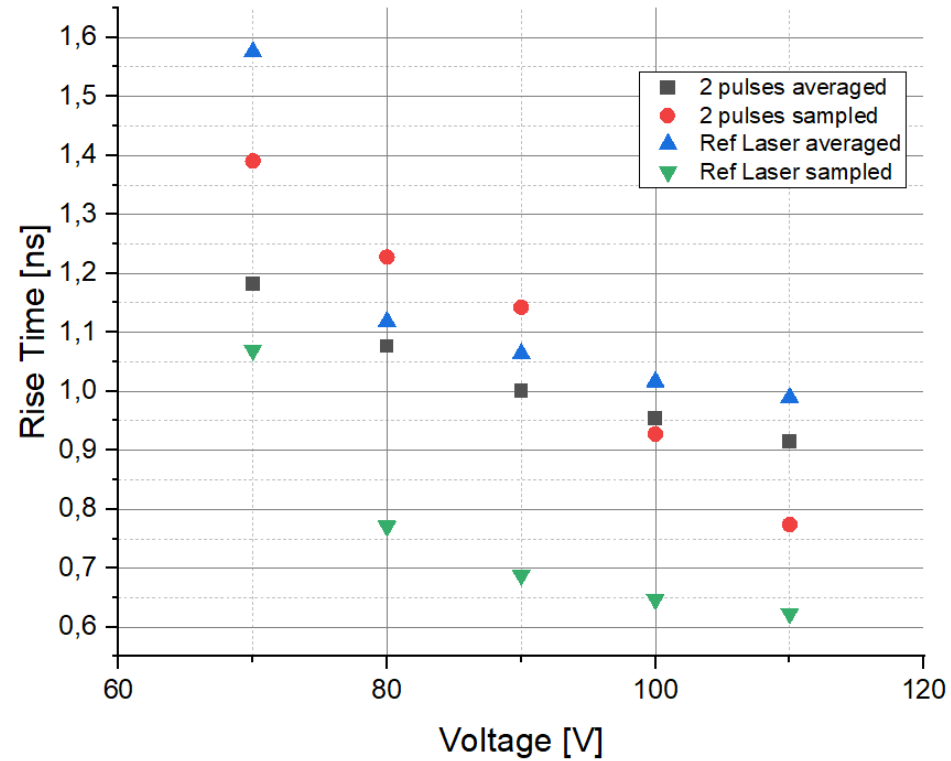
- Laser trigger as reference, 20 waveforms averaged
- Laser trigger as reference, sampled
- 2 pulses, self reference, 20 waveforms averaged
- 2 pulses, self-reference, sampled



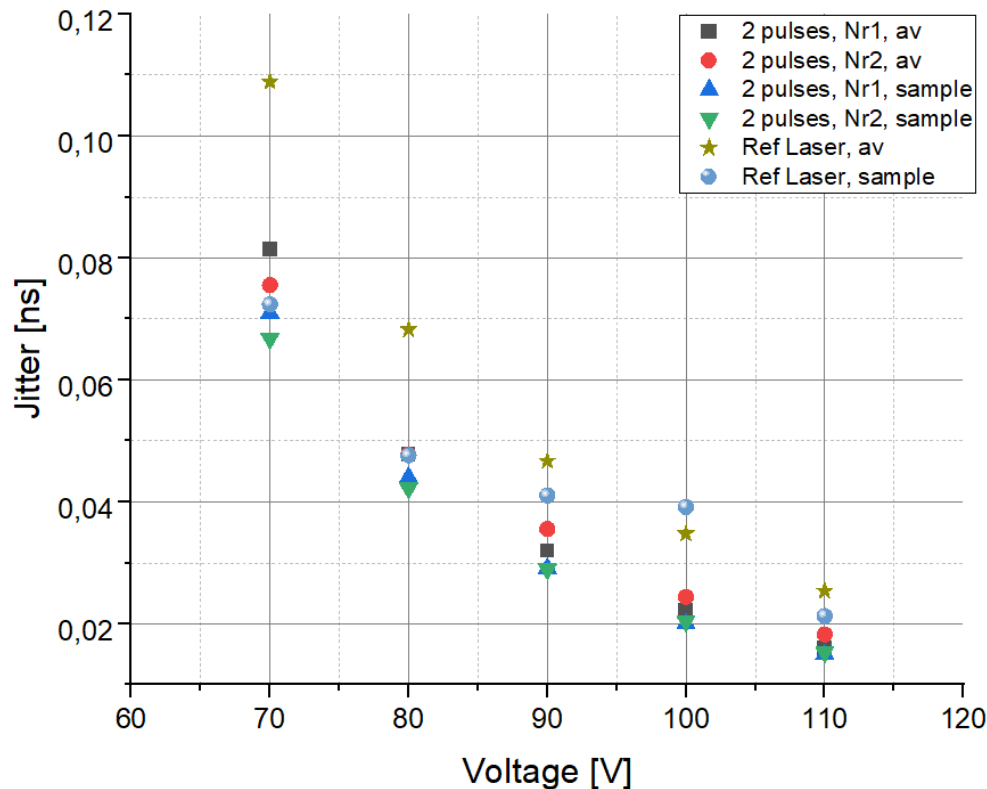
LGAD W33 S3 L5P4



LGAD W33 S3 L5P4



LGAD W33 S3 L5P4



Questions:

- Is using the averaging giving me “wrong” good results or can I use it with the laser measurements?
- The self-referencing seems to give more reliable results – can I use the sensor itself as timing reference?