Timing Status Freiburg

Albert-Ludwigs-Universität Freiburg

UNI FREIBURG

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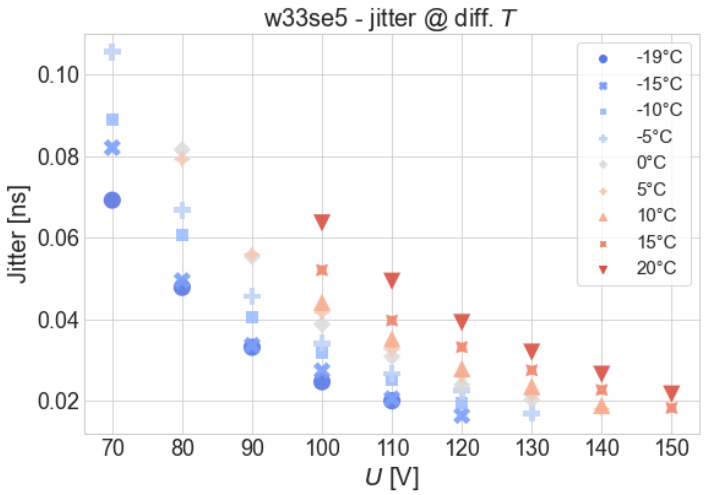
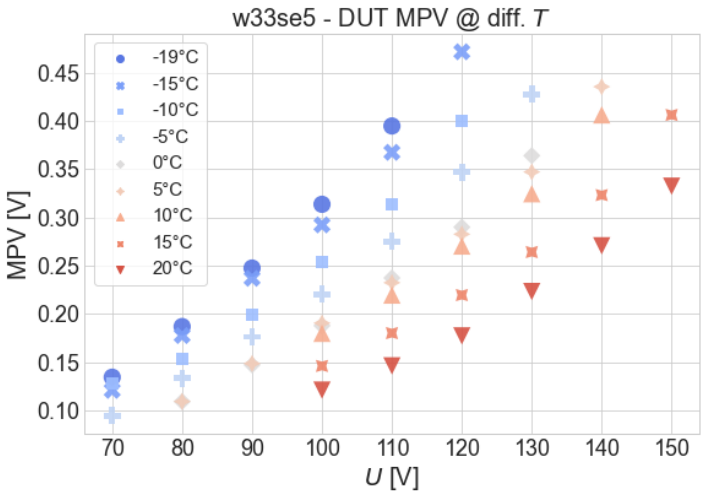
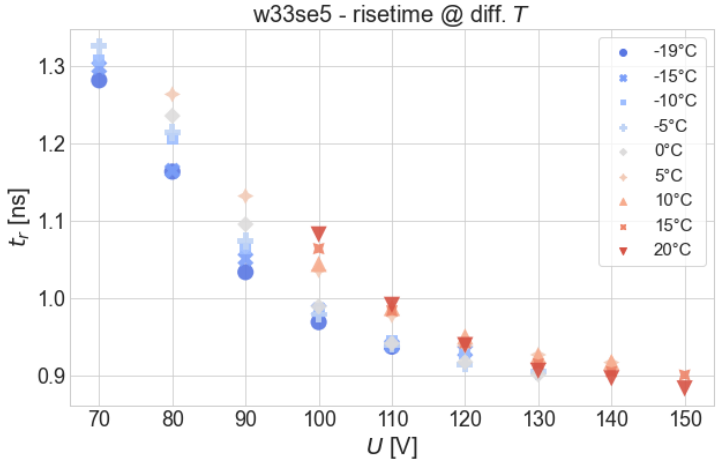
3D Timing Meeting

Leena Diehl, Christina Schwemmbauer

Temperature Dependence

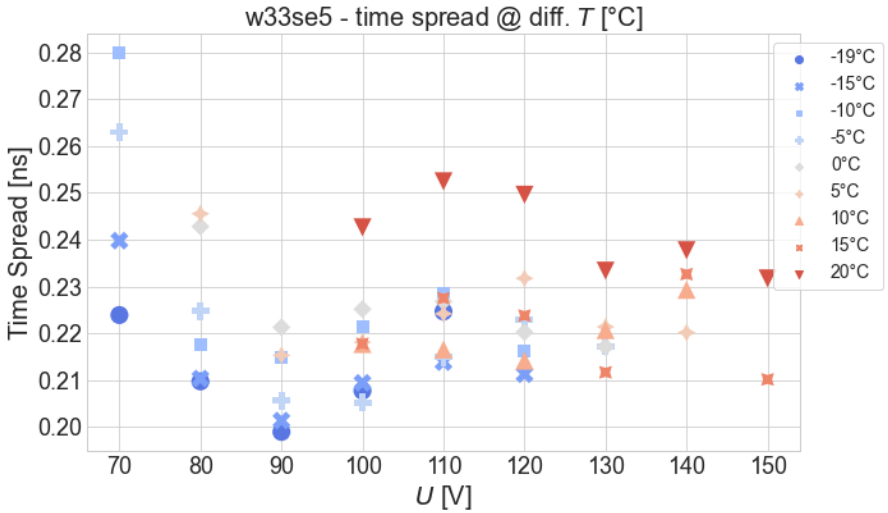




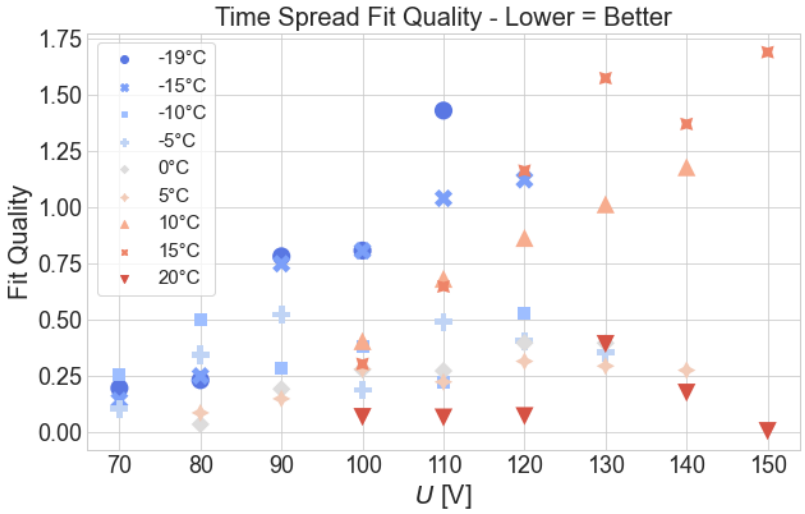


Expected behaviour

Time Spread Quality



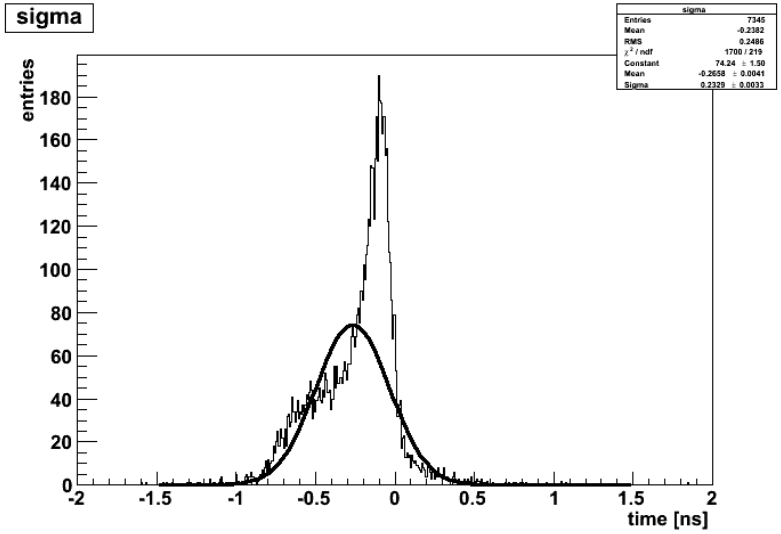
- Reliable time spread measurement up to certain limit
- Limit @ high *U* & low *T*

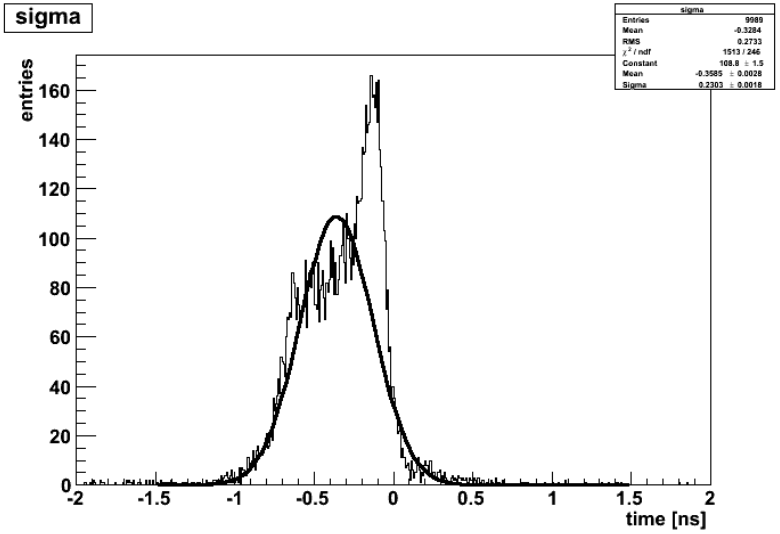


Work in Progress

- Improve oscilloscope resolution (call for bids ongoing)
- PMT (ordered, arrives in ~2 months) + scintillator (✓) as last trigger stage (instead of diode)
- Improve cooling (ongoing)

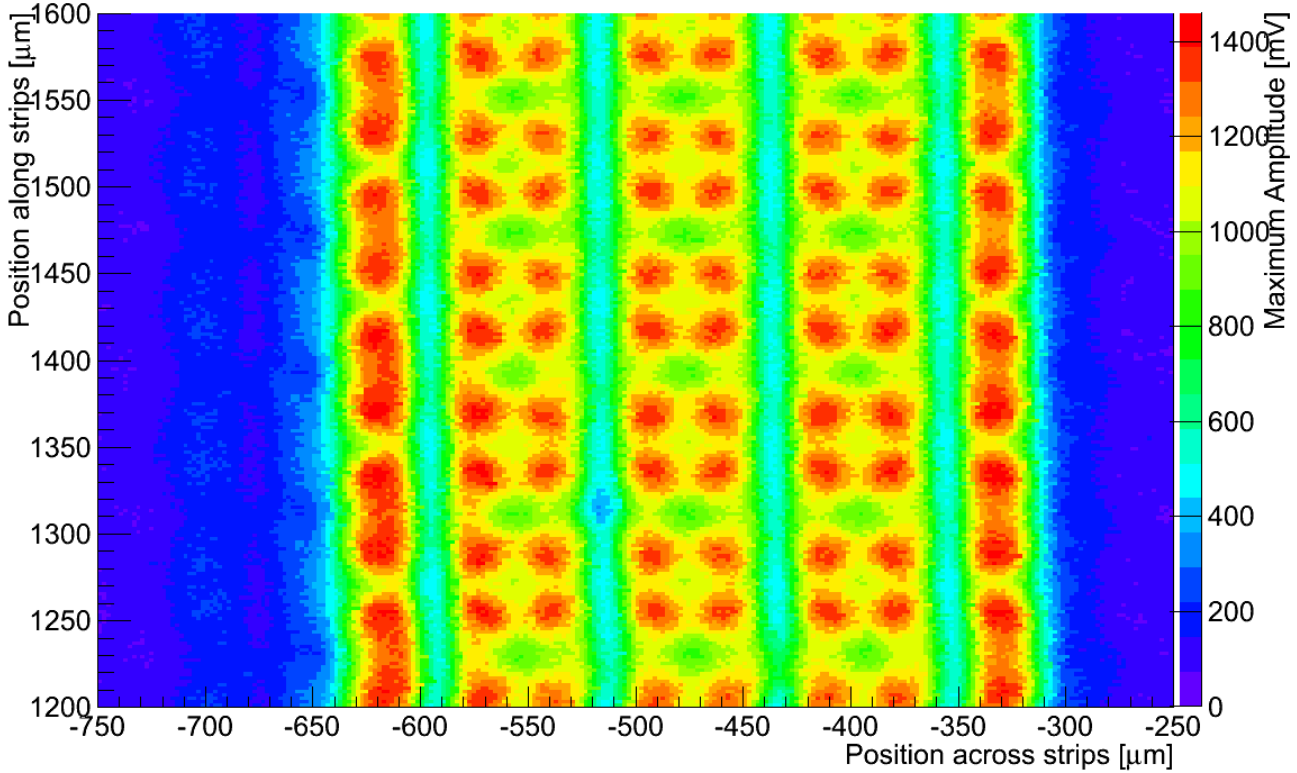
Influence of Oscilloscope Resolution





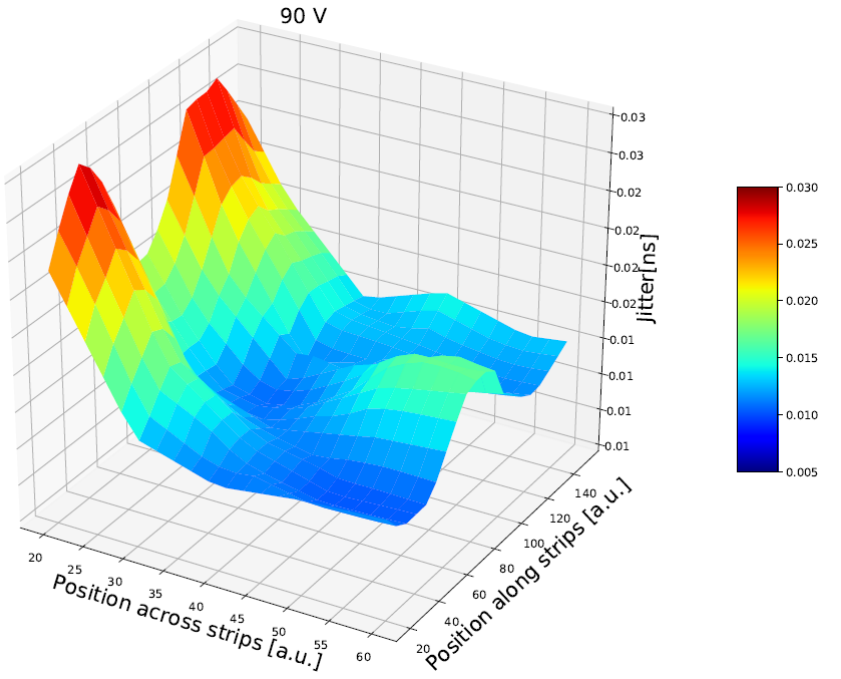
Same measurement, improved oscilloscope resolution

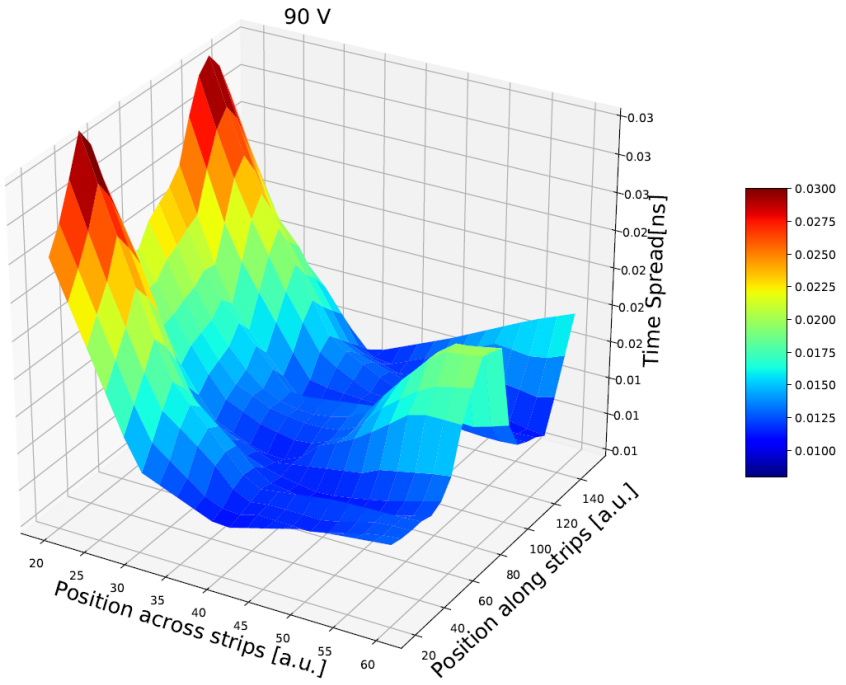
TCT measurements



- Infrared laser used, 3D sensor on the timing board
- 4 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-referencing, averaged pulses





- Positioning still by hand -> uncertain if the positioning was completely correct
- Some position dependence is definitely visible
- Measurement to be repeated with automatic positioning soon