

Weekly Update

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Aug 31/2016

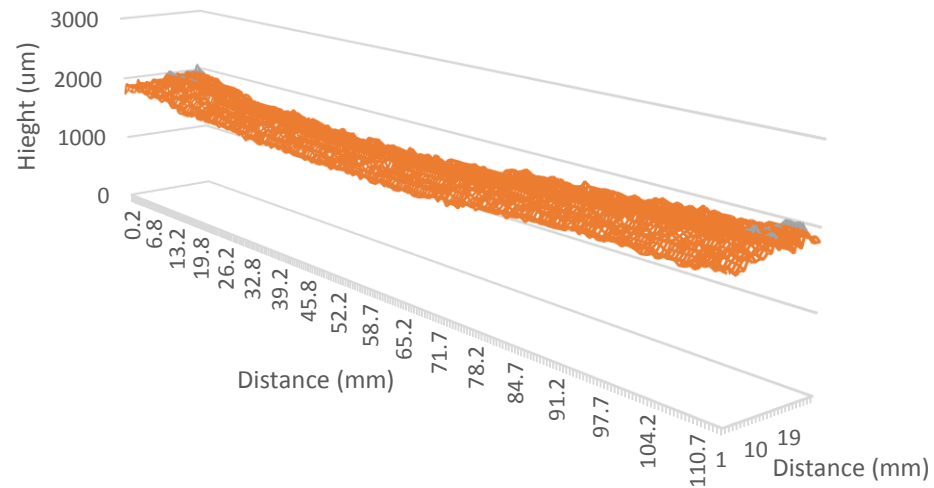
Linear Stage + Laser Experiment

The linear stage has been integrated to the laser experiment (almost completely). The first test was to scan a 25mm area, not manually as the data of the last meeting.

It takes 15 seconds to scan that area. The time for the step of 20 mm has not been yet measured.

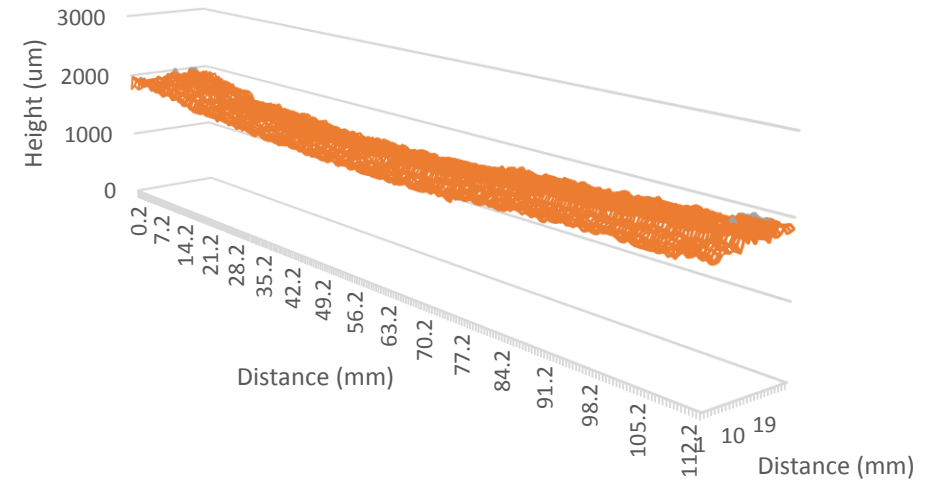
Three set of data were taken: 1) with nothing, 2) with a flaw (floor step) on the left side, and 3) with nothing again.

Empty Stave



0-1000 1000-2000 2000-3000

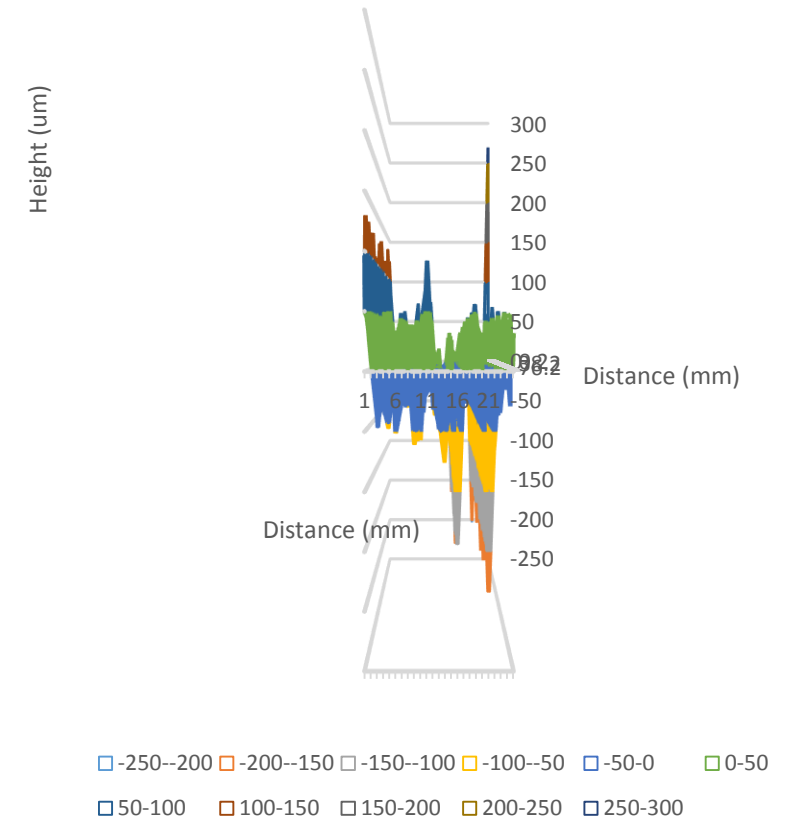
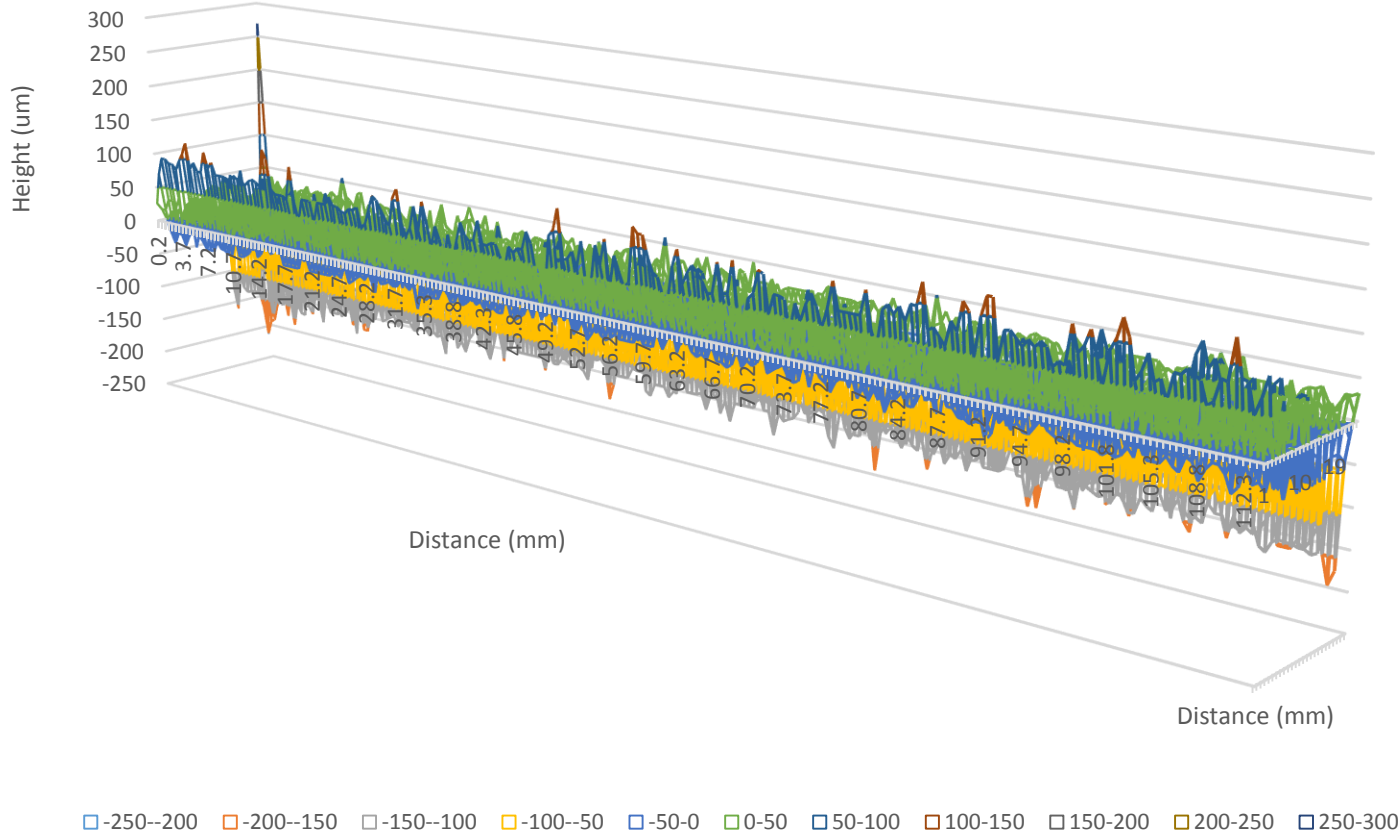
Before the flaw measurement



0-1000 1000-2000 2000-3000

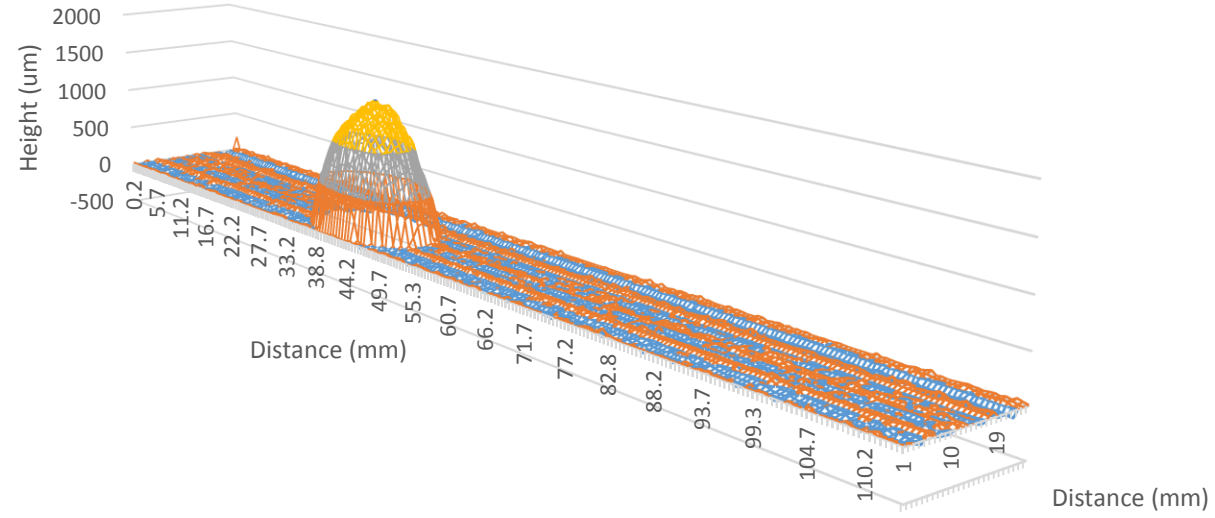
After the flaw measurement

Difference between both measurements

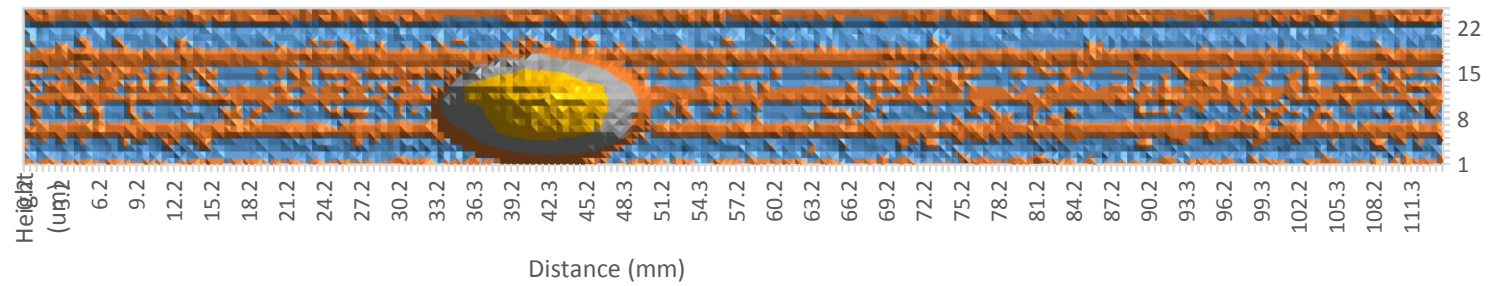


Standard Deviation = 43.83 μm

Flaw Measurements



■ -500-0 ■ 0-500 ■ 500-1000 ■ 1000-1500 ■ 1500-2000



Distance (mm)

■ -500-0 ■ 0-500 ■ 500-1000 ■ 1000-1500 ■ 1500-2000

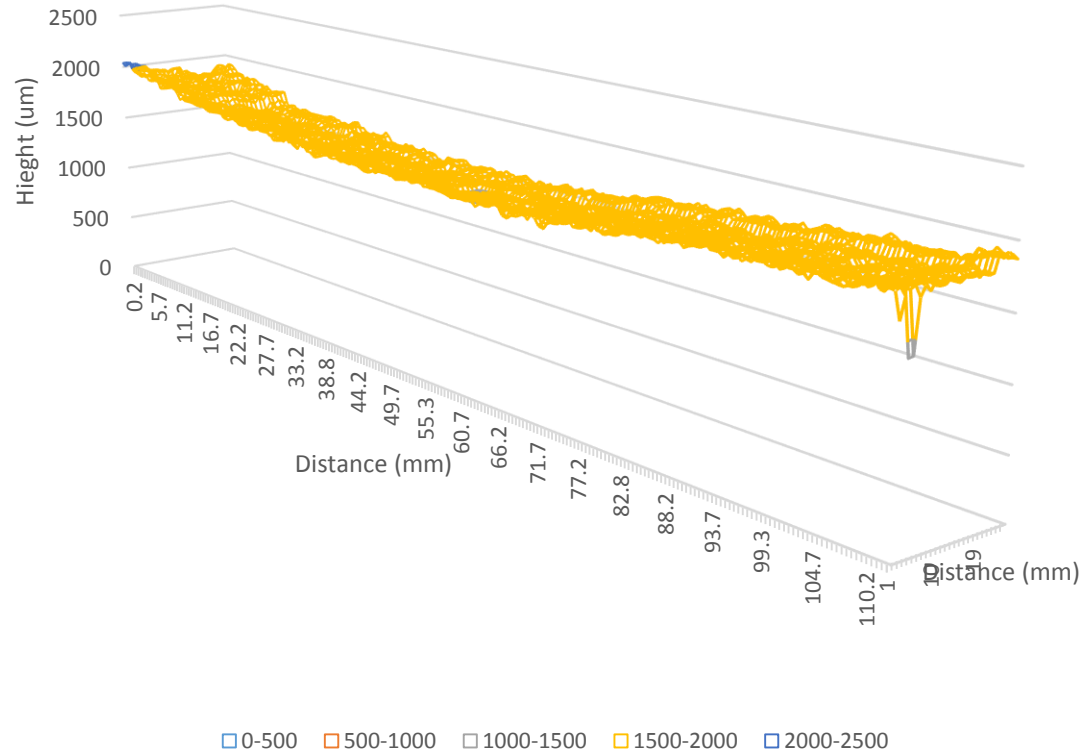
Summary

Connecting linear stage with laser experiment: done (almost).

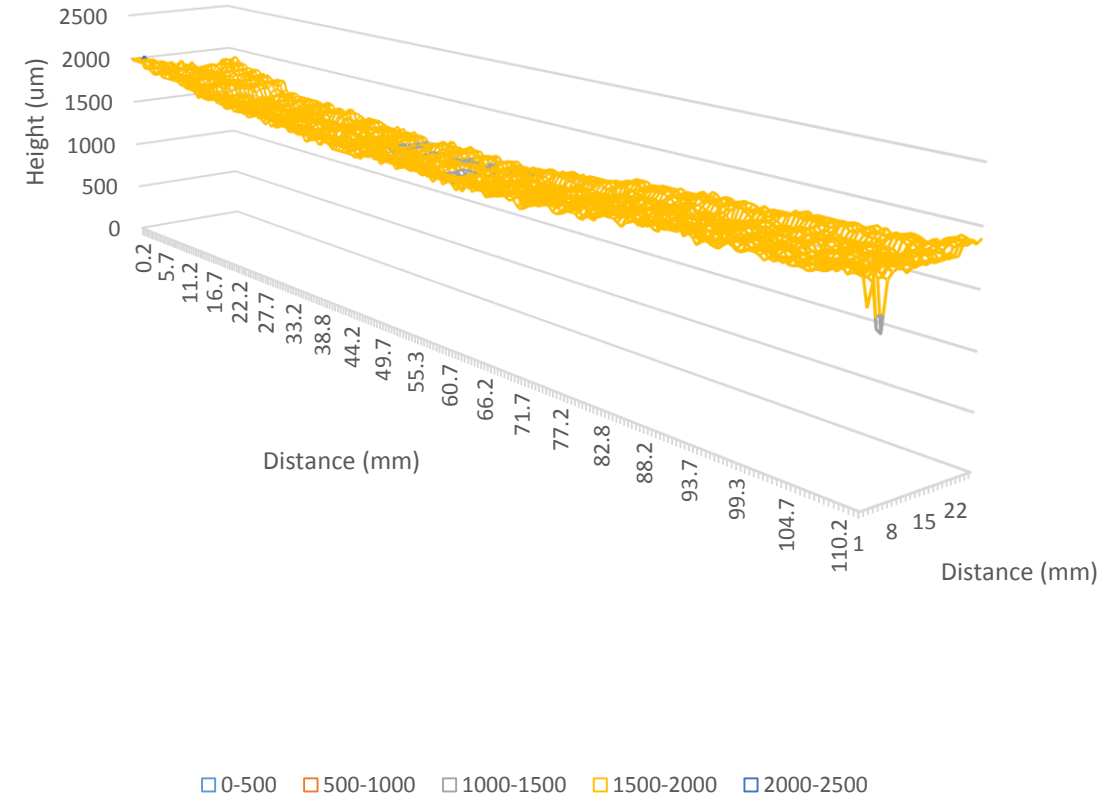
- The setup can scan 25mm areas.
- Need improvement to scan larger areas (not too hard, I think)
- Re-organize the code, and include more subroutines such as to move the stage without taking data, to calibrate, etc...
- Documentation

Same Data with Preset (constant SF)

No flaws

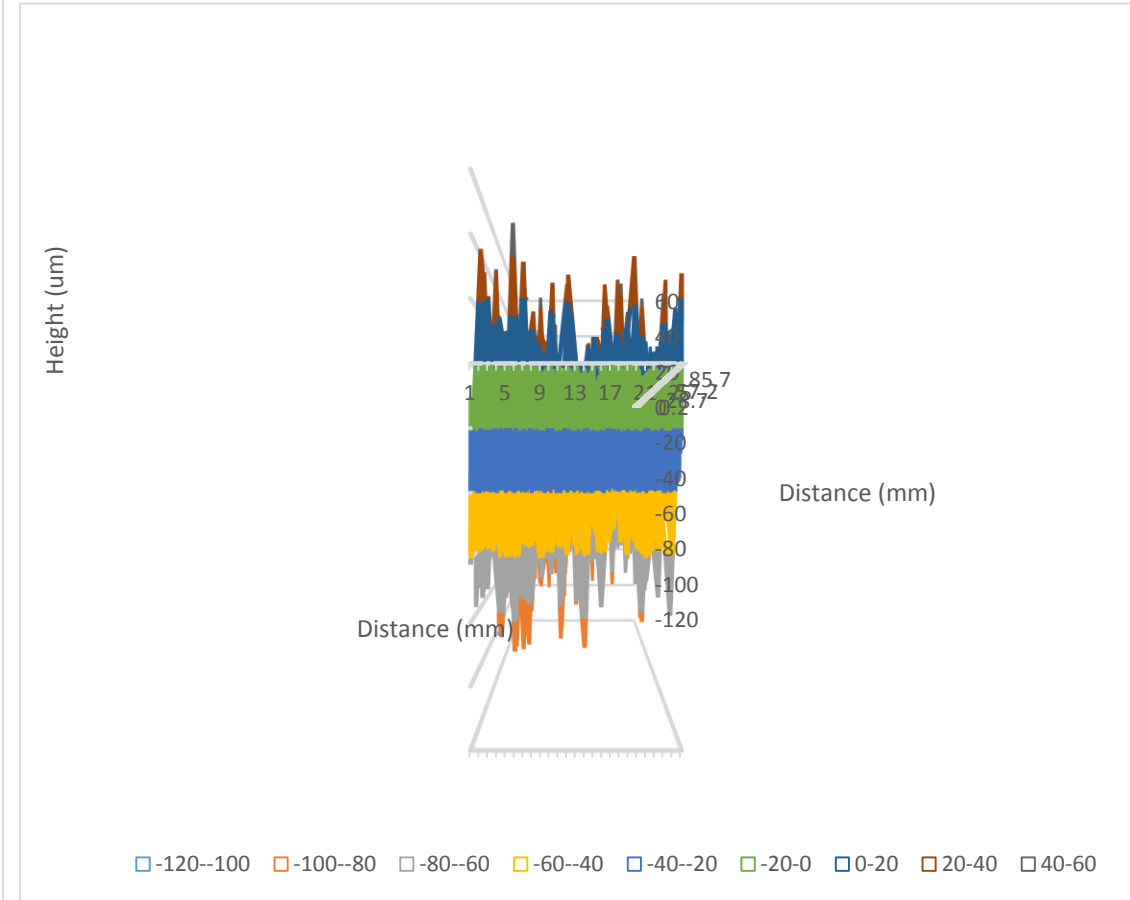
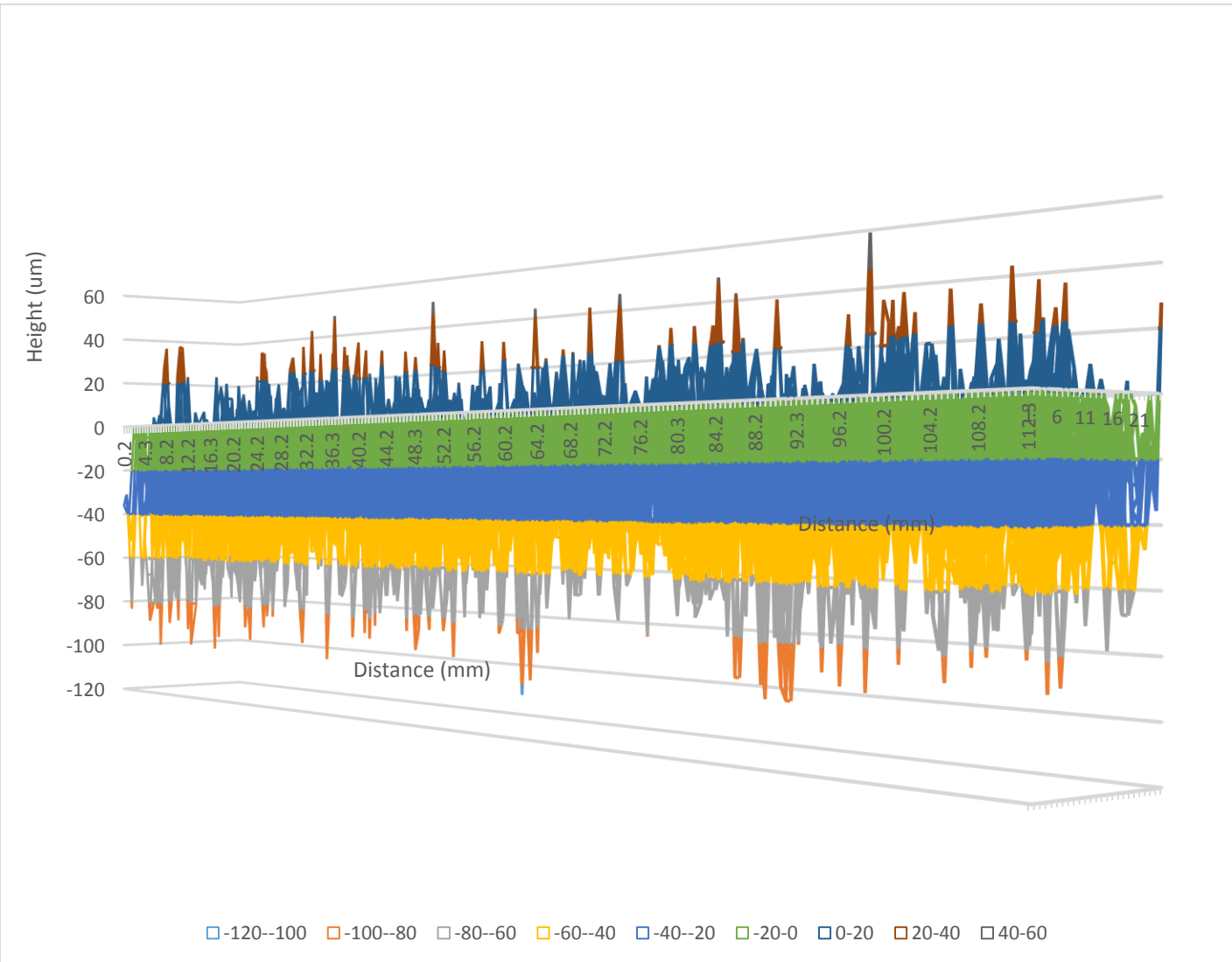


Before Flaw Measurement

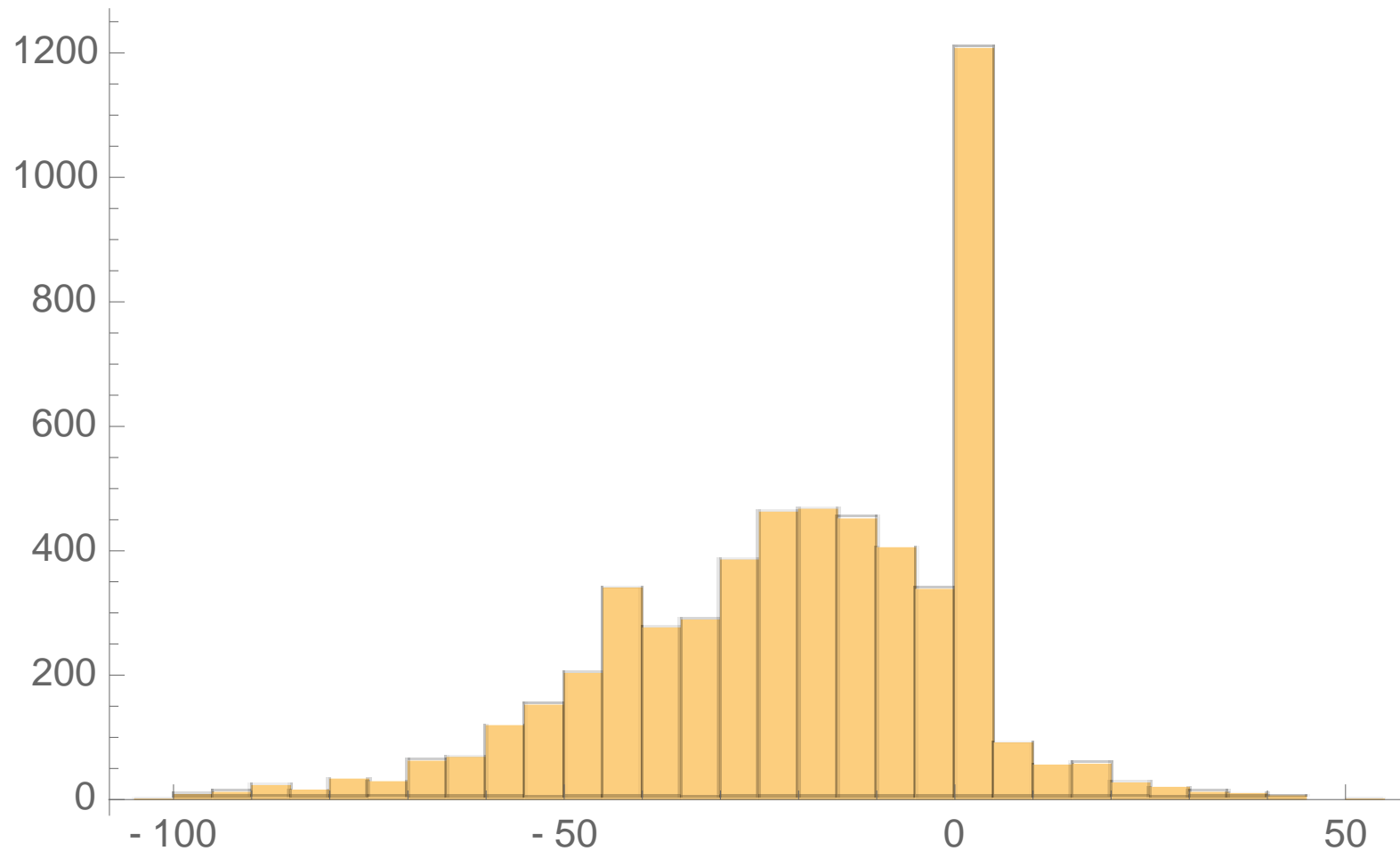


After Flaw Measurement

Difference between measurements



Histogram with the empty measurements difference



Difference between Empty and Flaw measurements

