# Weekly Update

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September 28th - 2016

# Scanning more than 25 mm x 12 cm areas

- Addition to the code has been implemented.

- Some preliminary data has been taken, but there was an improved in the 'finding center' method (see next slides).

- The whole small stave cannot be scanned yet because the side bars are not long enough to cover the length of the stave.

- It is very easy to select the area (25 mm x 12 cm) to scan, just adjust a parameter in the interface (fancy user friendly).

- Also, I am not getting the peaks BNL was getting when moving the stave.

# But first, problem with the laptop

- Windows Office was changed from 2016 to 2013, since it was making the program run much slower.

- Everything else seems to be working fine and fast now.

- The process of scanning an area of 25 mm x 12 cm takes 15 seconds. Early this week was taking about a minute to do so.

# Problem with the 'Finding Center' code

- After some indications, I found that the whole 'Finding Center' option was WRONG! If the weighted center was selected, the code selected the NO-weighted center… so the whole time we have been taking data with the more primitive method to find the center.

- It was easy to fix, and the new plots included the weighted center method.

# Difference between empty and empty

- The same area is scanned twice in a row and the difference is plotted. Now we don't see the 0.0 values as before.

# Histogram of the difference between empty and empty

Now we see one Gaussian distribution and not two as before.

The sigma is 14.11 um.

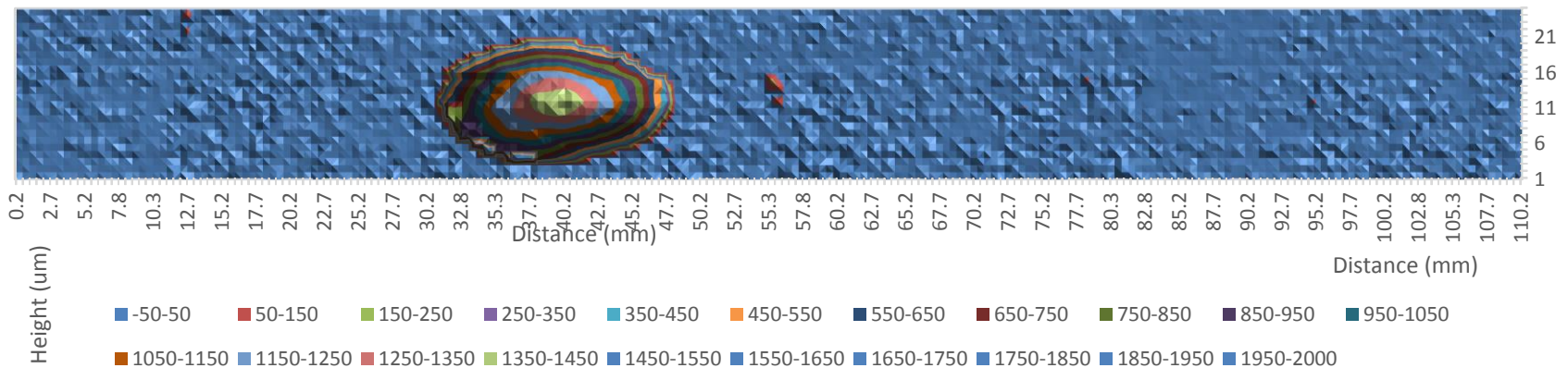The difference between two measurements is not longer quantized.
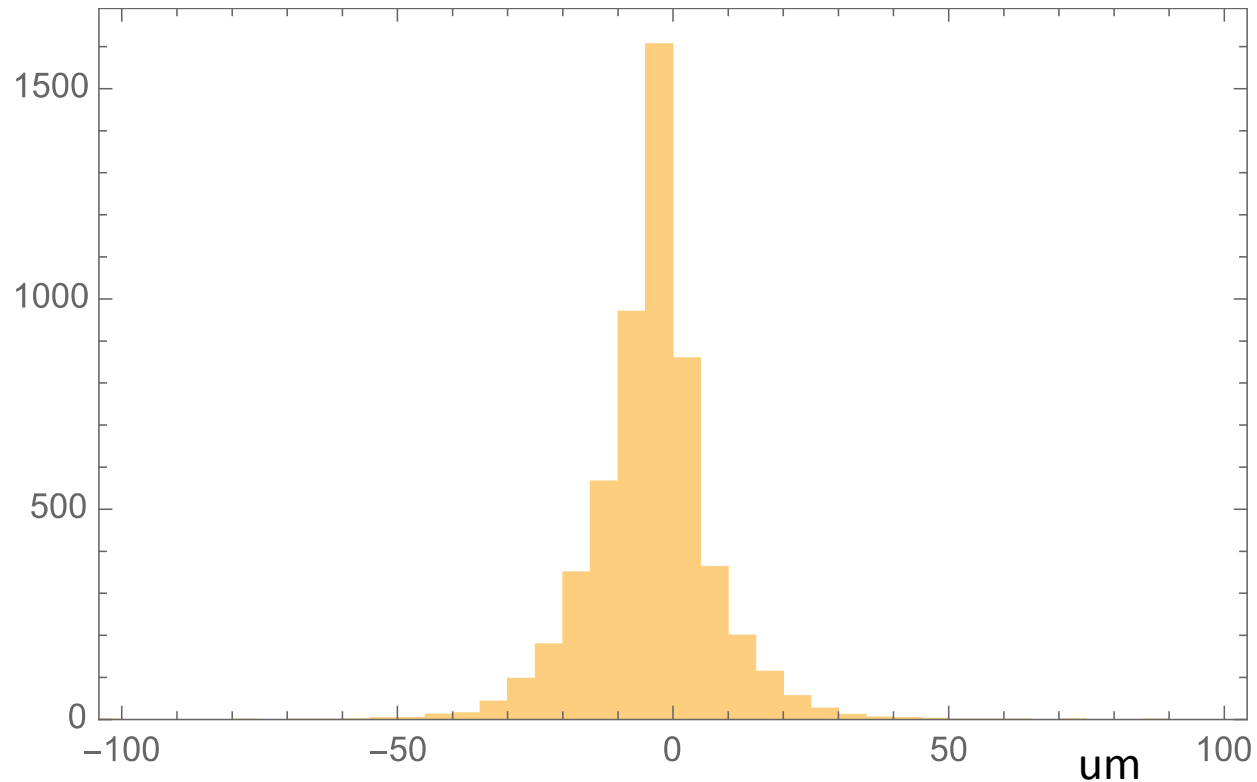


In the previous case, excluding the 0.0 values, the sigma was 22.27 um.

# Seeing a flaw

In this plot, the difference between the measurement with a flaw and without nothing is shown. Finally, I was able to change the color resolution to 100 um. In this case, the flaw is clear in a blue (-50 to 5- um) background.

# Work to do

- Take data with more than one area (25 mm x 12 cm) and calculate the resolution in this case.

- Change the preset values to only the SF and not the other parameters.