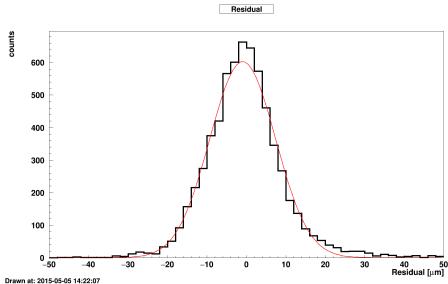
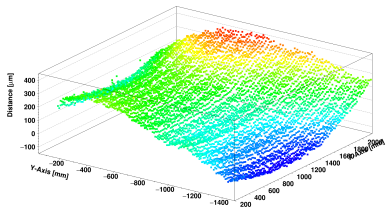


Granitetable as Reference Surface

- Planarity of granite table: $\sigma_{ref} < 6 \mu m$
- Use of granite table as reference surface to eliminate miss measurement caused by bending of CMM
- Bending of CMM in order of $0.5 mm$
- Two sensors available
red laser $\lambda_{red} = 670 nm$
blue laser $\lambda_{blue} = 405 nm$
- Less penetration of surface with shorter wavelength
⇒ smoother reference surface with blue laser

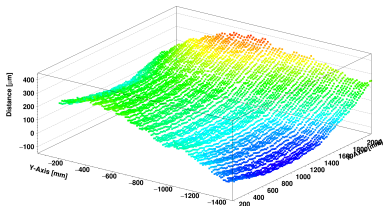
Reference Measurement with Red Laser



Drawn at: 2015-05-05 14:22:07

- Difference between reference measurements:
 $\sigma_{red-blue} = 9 \mu m$

Reference Measurement with Blue Laser



Copper Strips on FR4 PCB Material

- Scan of FR4 with 35 μm thick Cu-strips with a pitch of 450 μm
- Constant movement across surface
Continuous readout
 \Rightarrow 1 measurement point / μm
- Gaussian fit to strip pitch:
 $\mu_{pitch} = 451 \mu\text{m}$; $\sigma_{pitch} = 11 \mu\text{m}$
- Gaussian fit to strip height:
 $\mu_{height} = 35 \mu\text{m}$; $\sigma_{height} = 3 \mu\text{m}$

