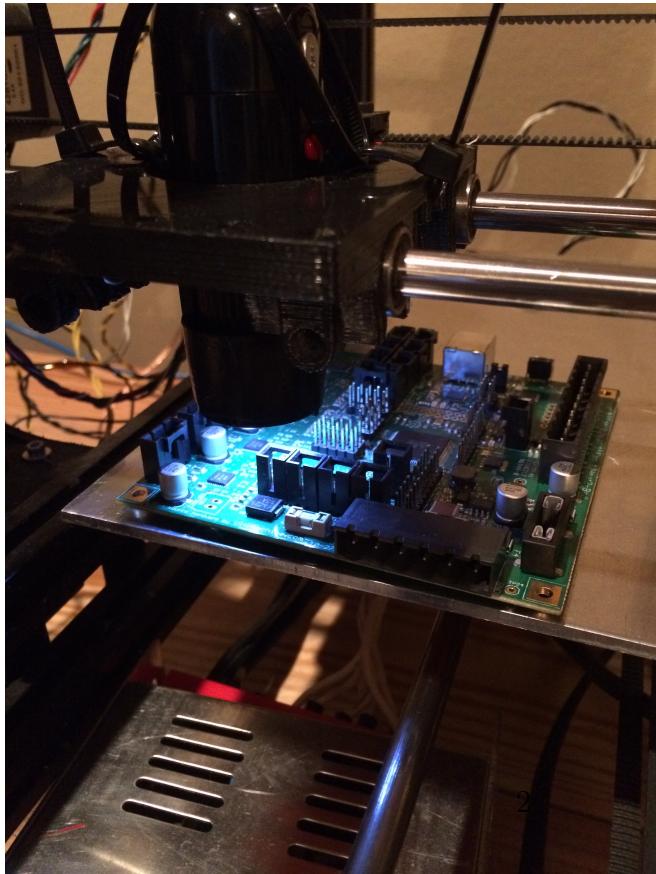
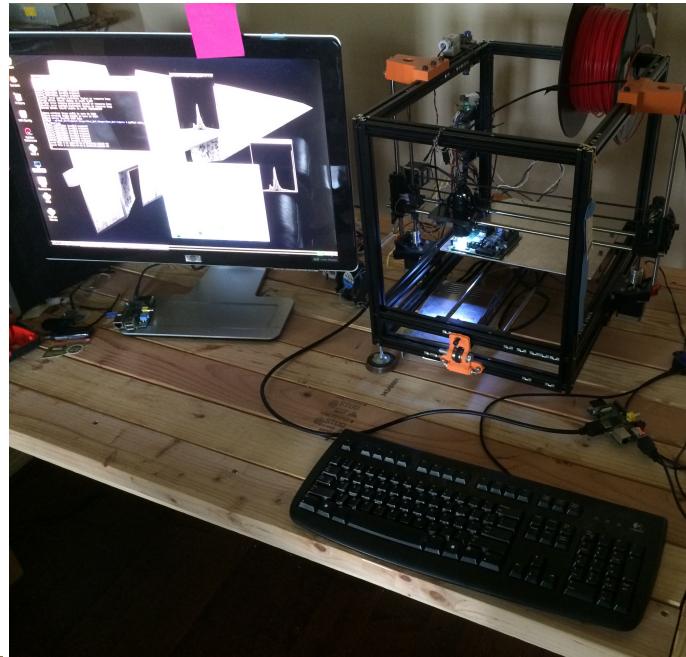
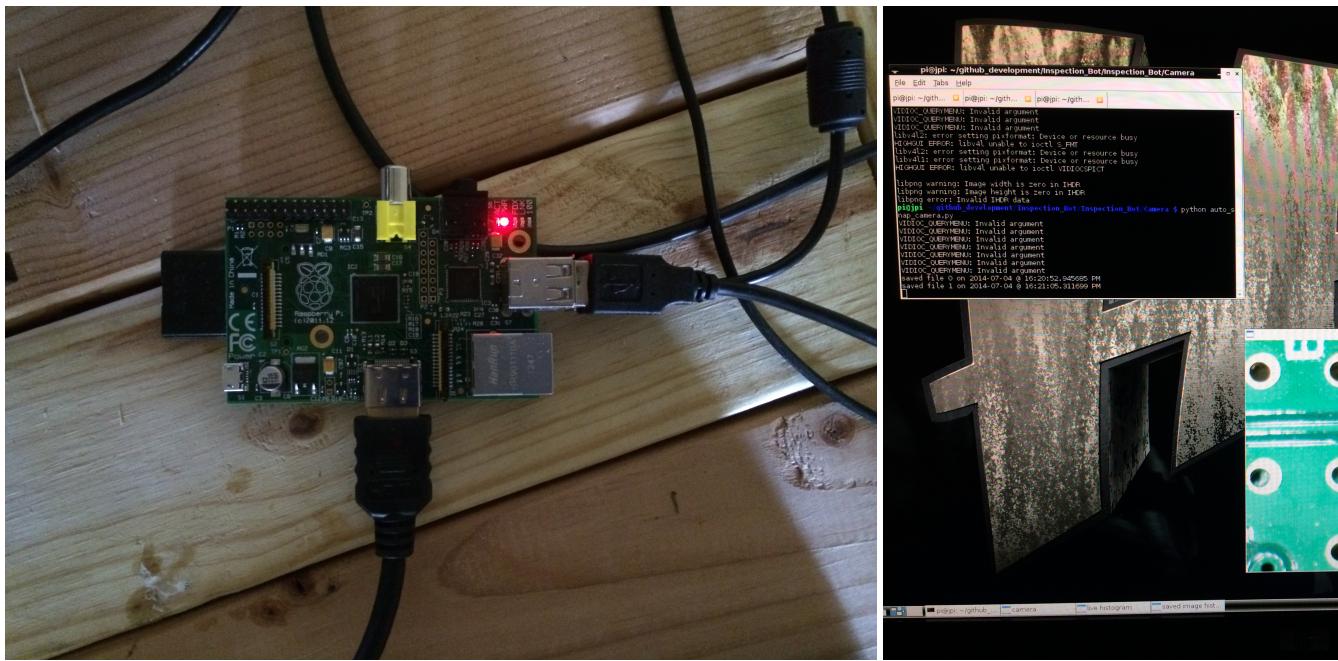


PCB Analysis

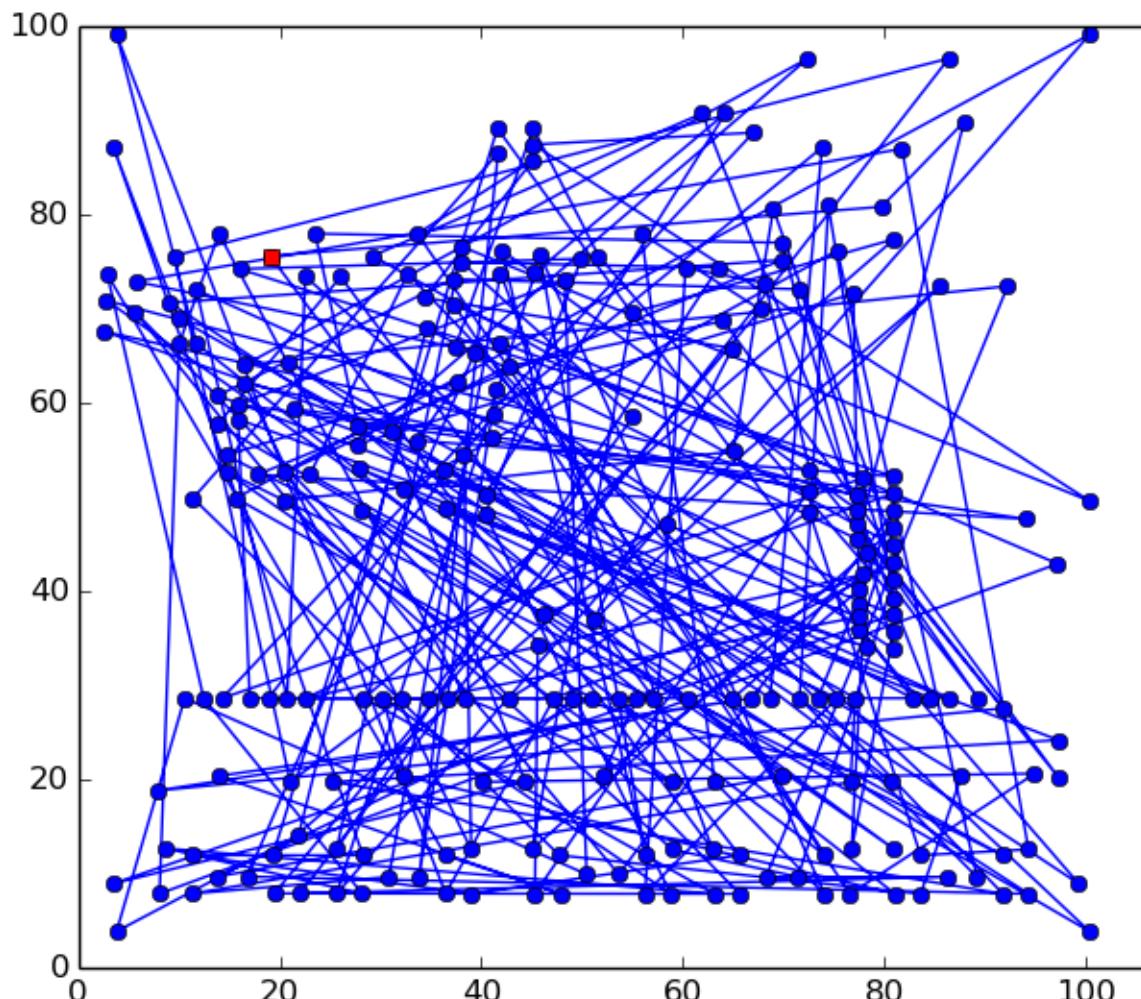
July 19, 2014

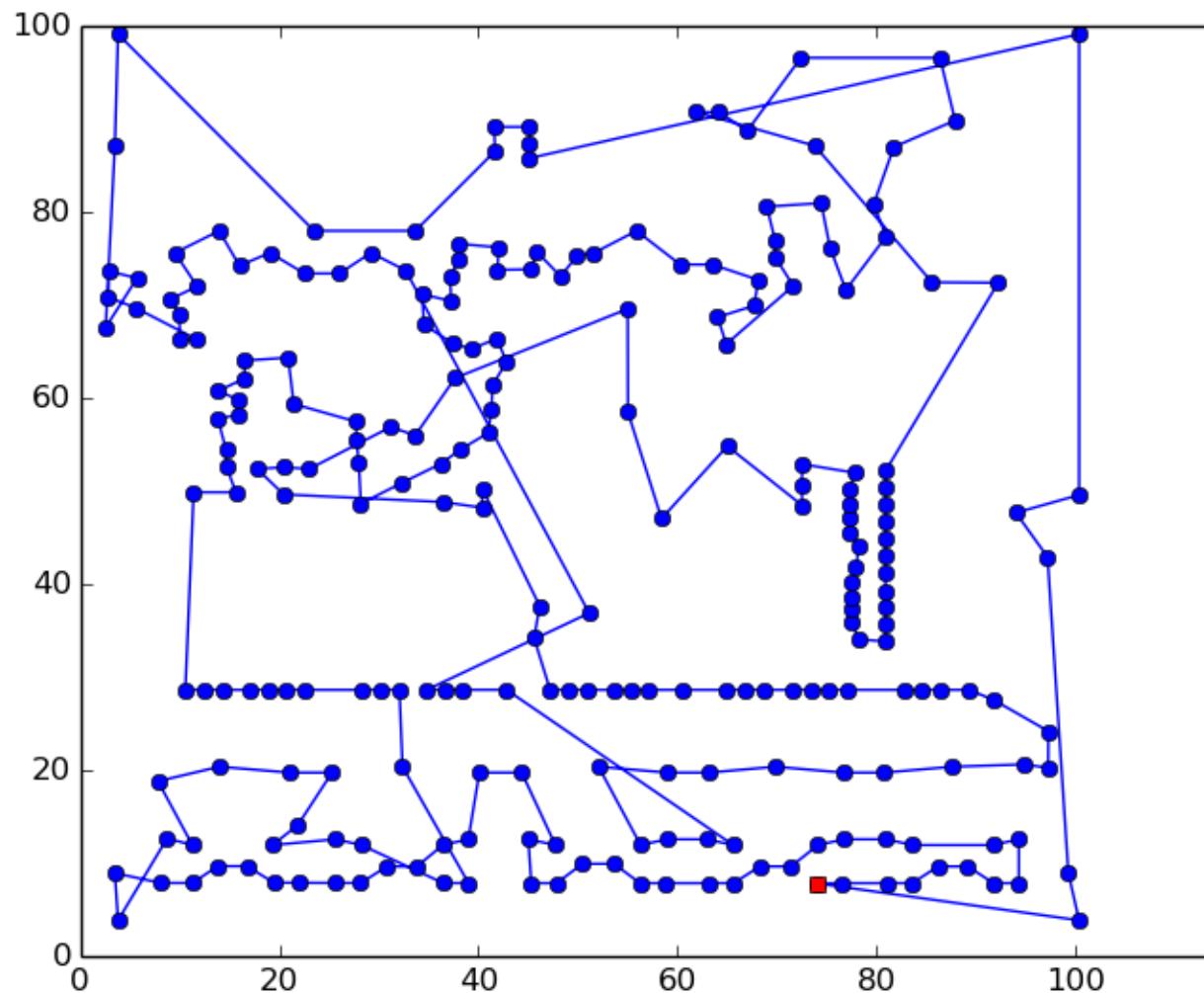
1 Computational Hardware



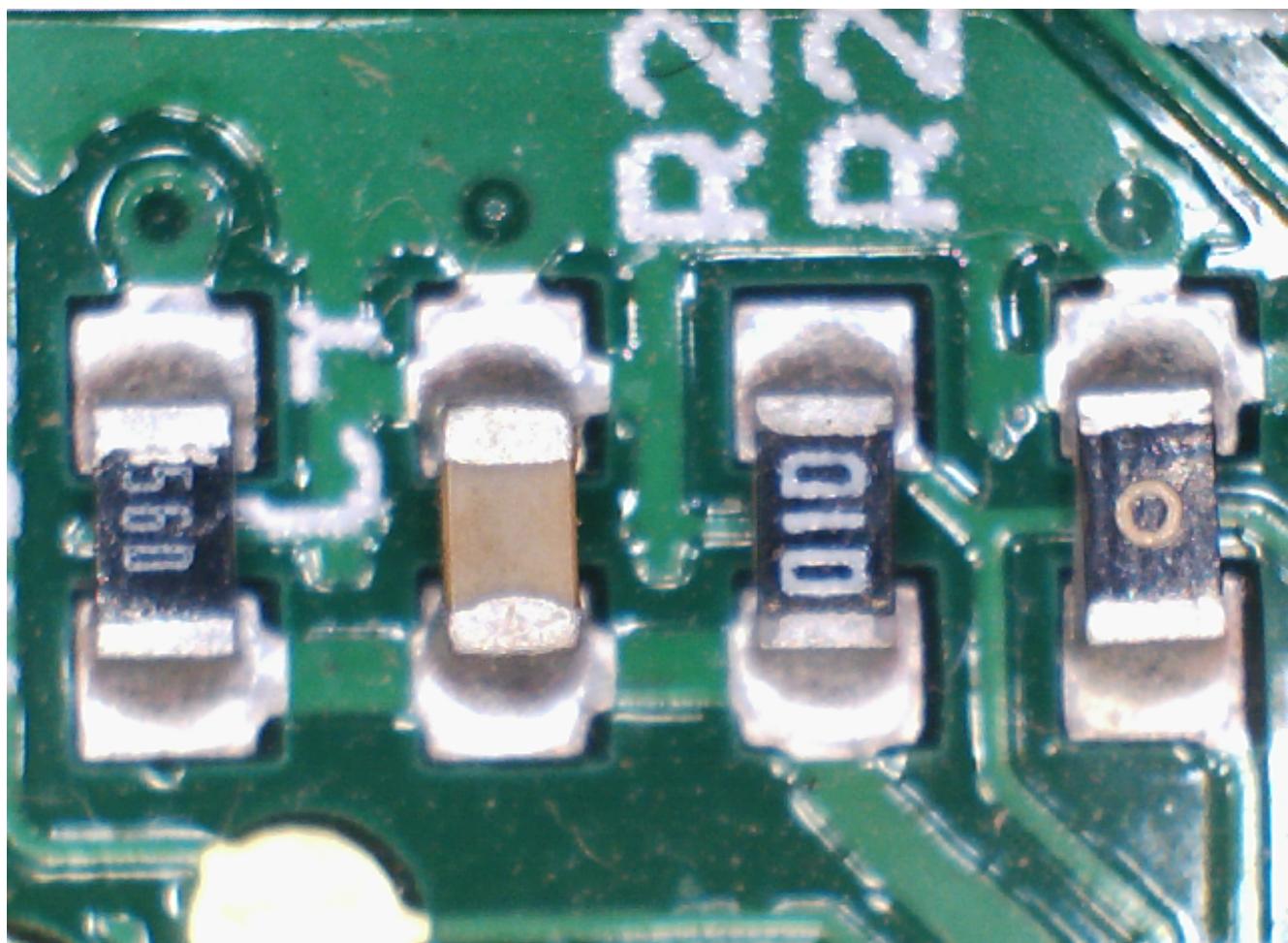


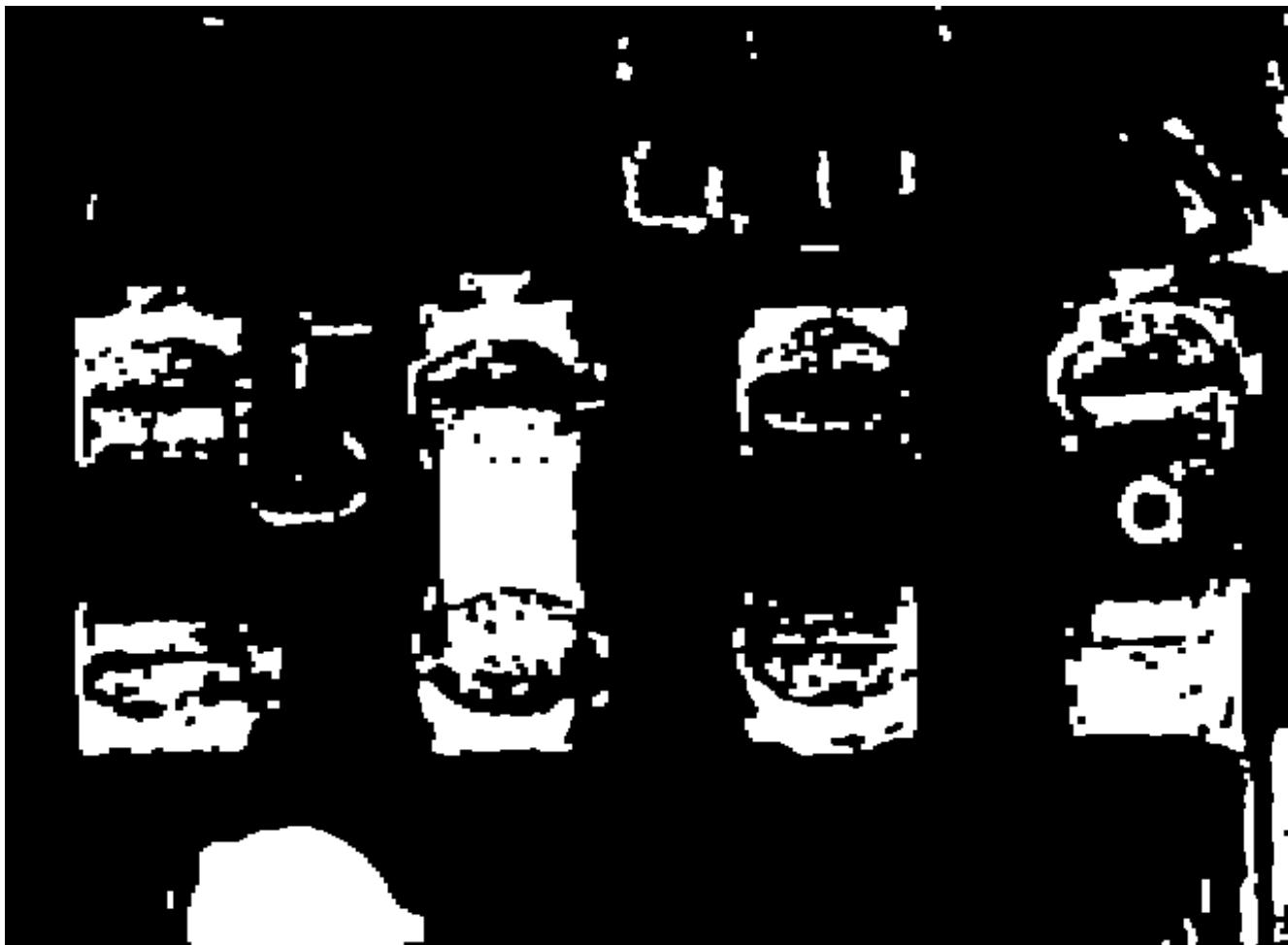
2 Printer Path

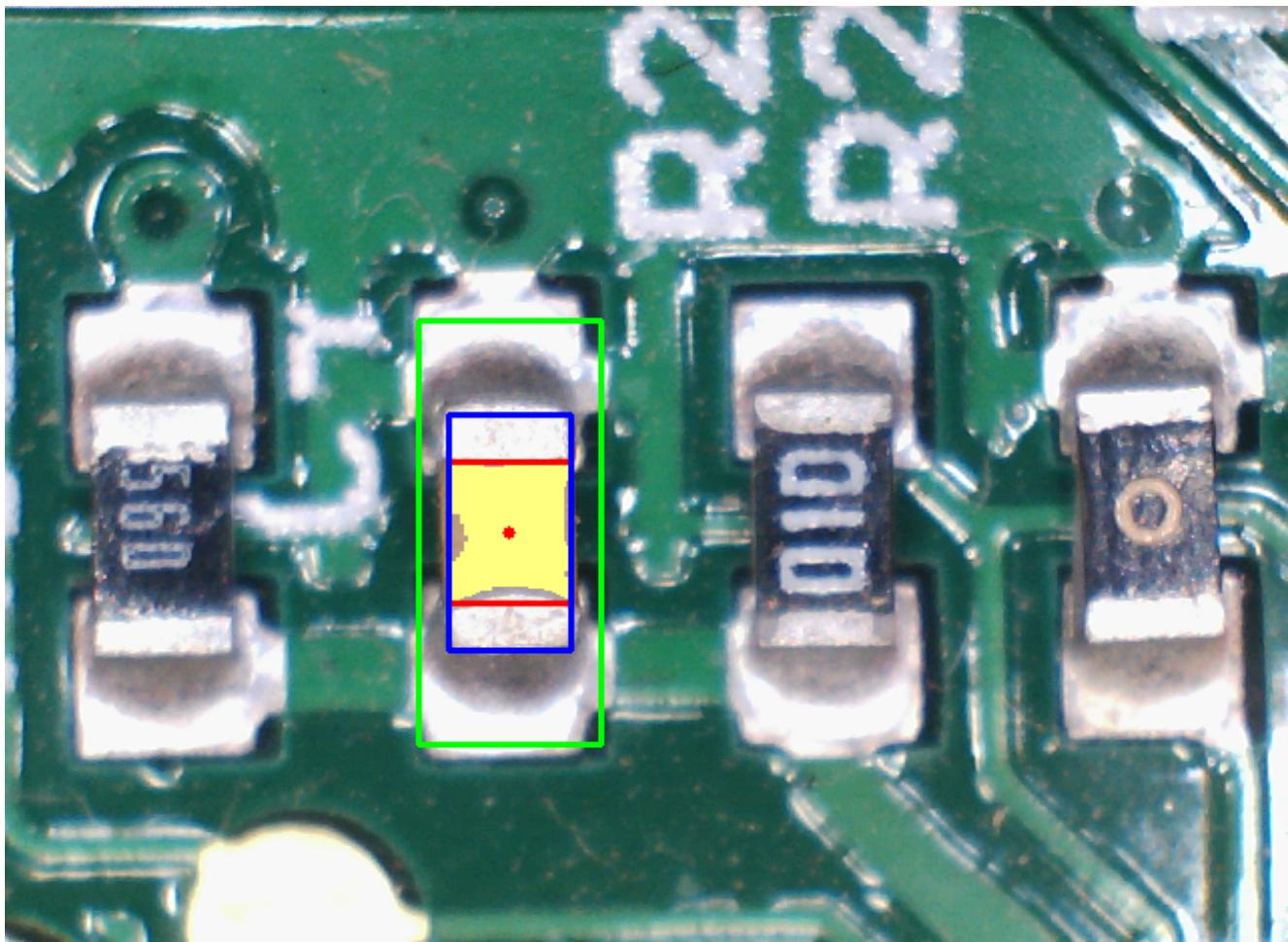




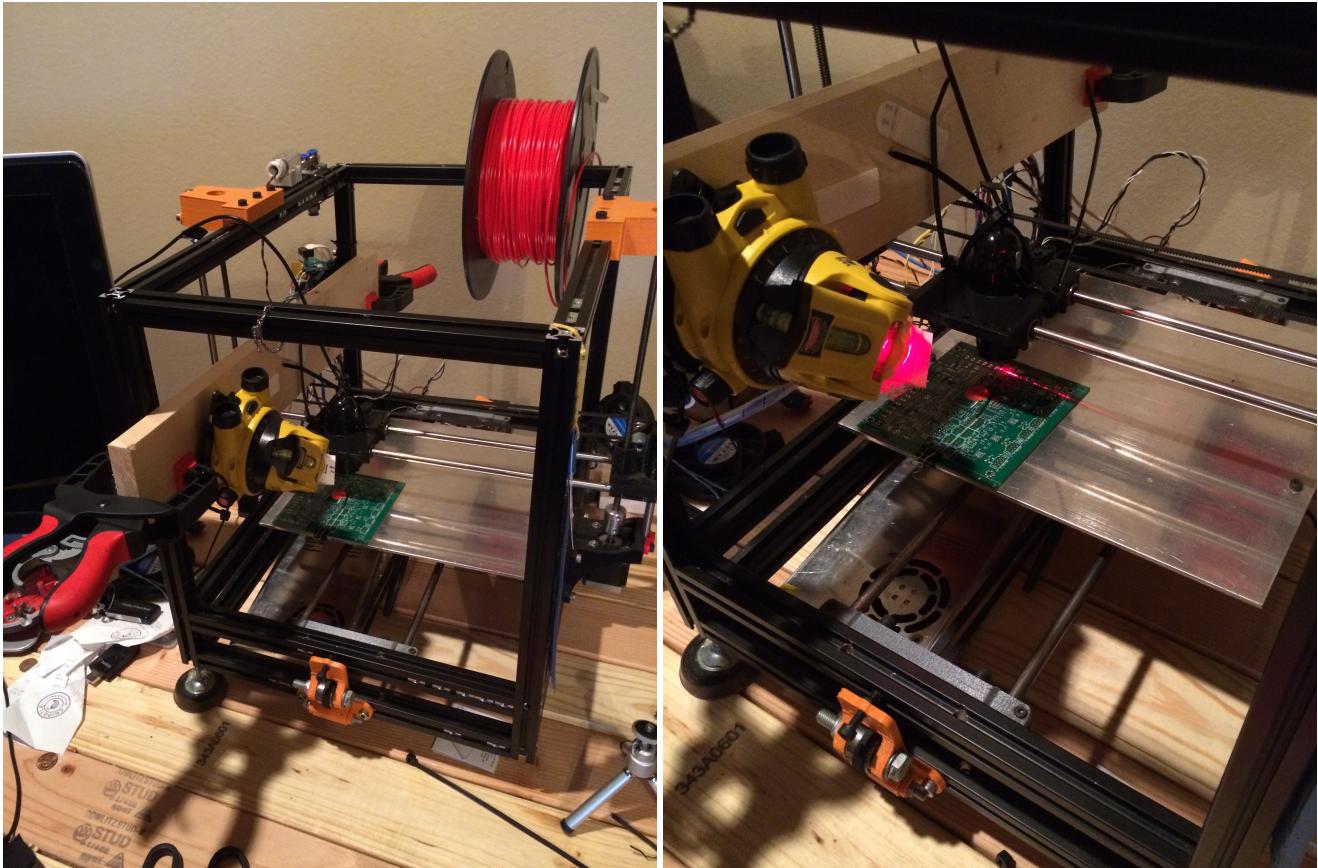
3 Chip Analysis Setup

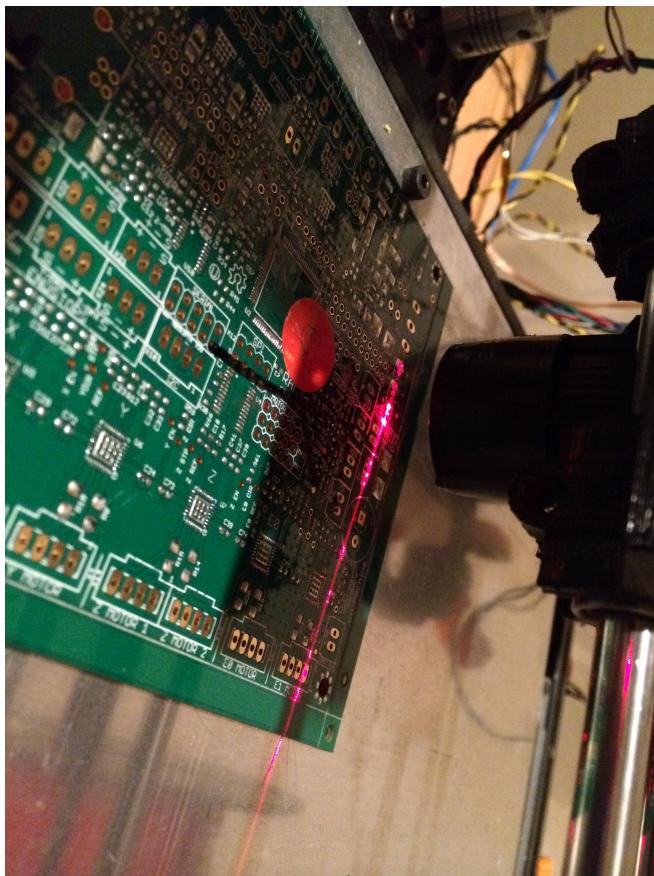


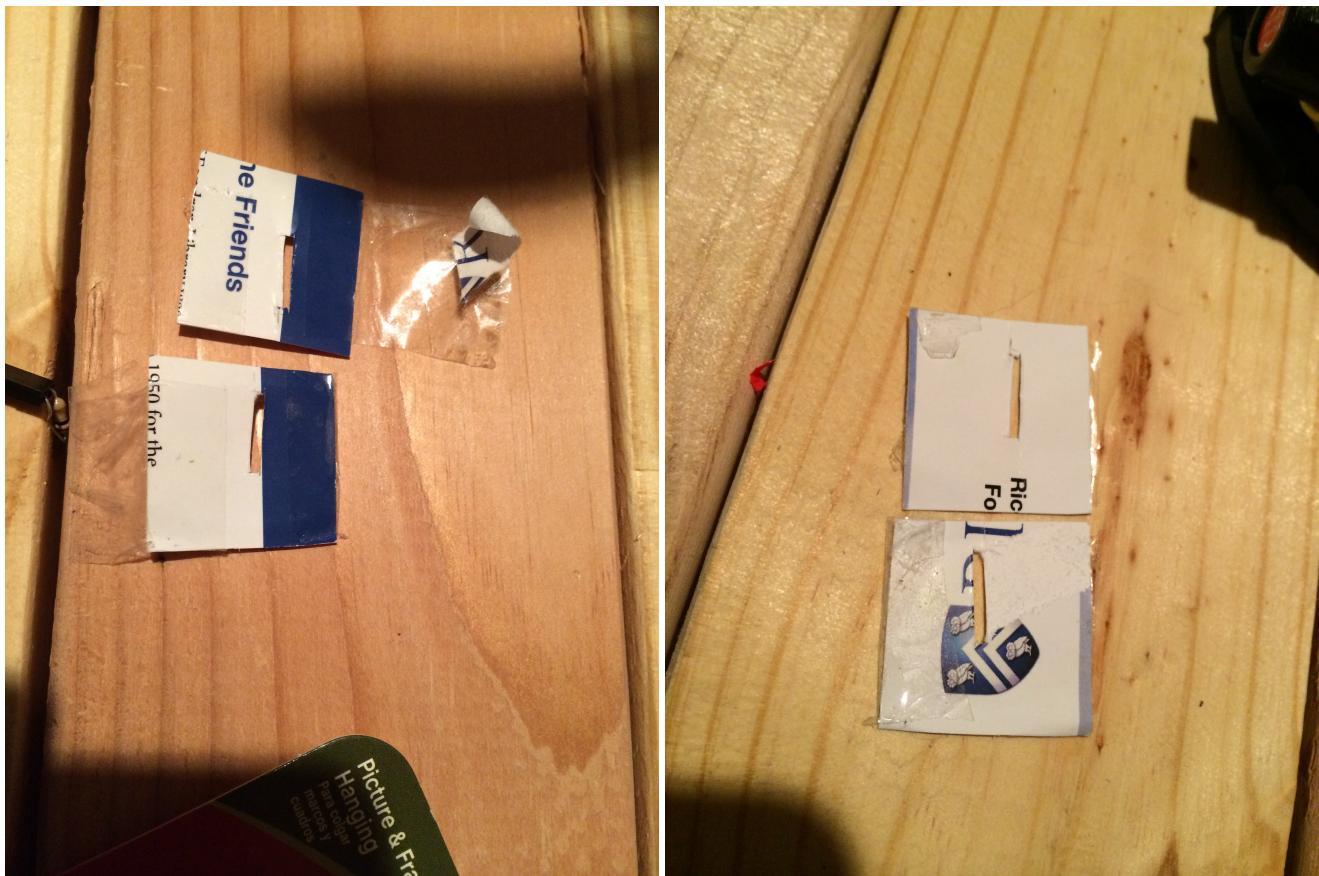


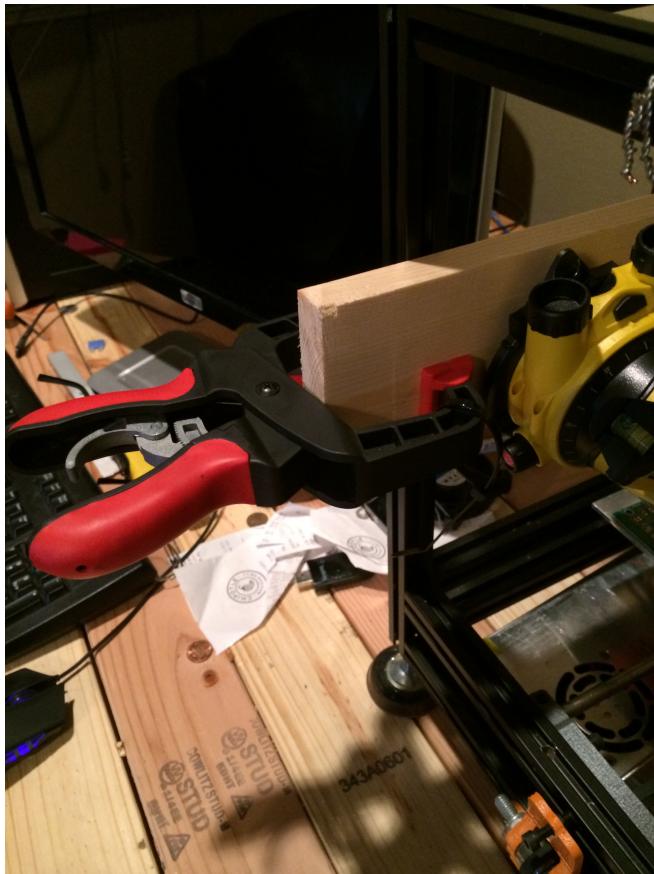


4 Volume Analysis Setup

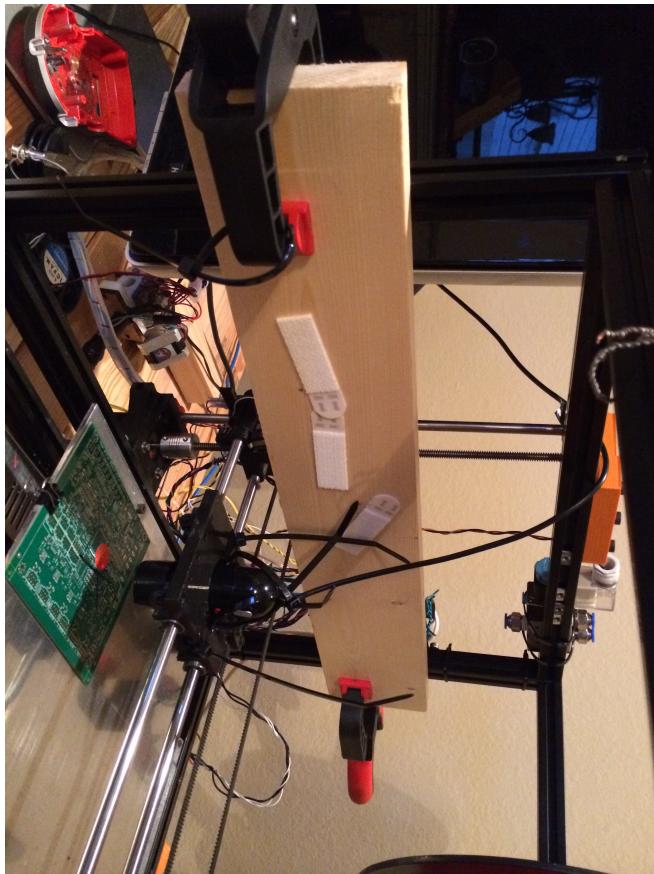


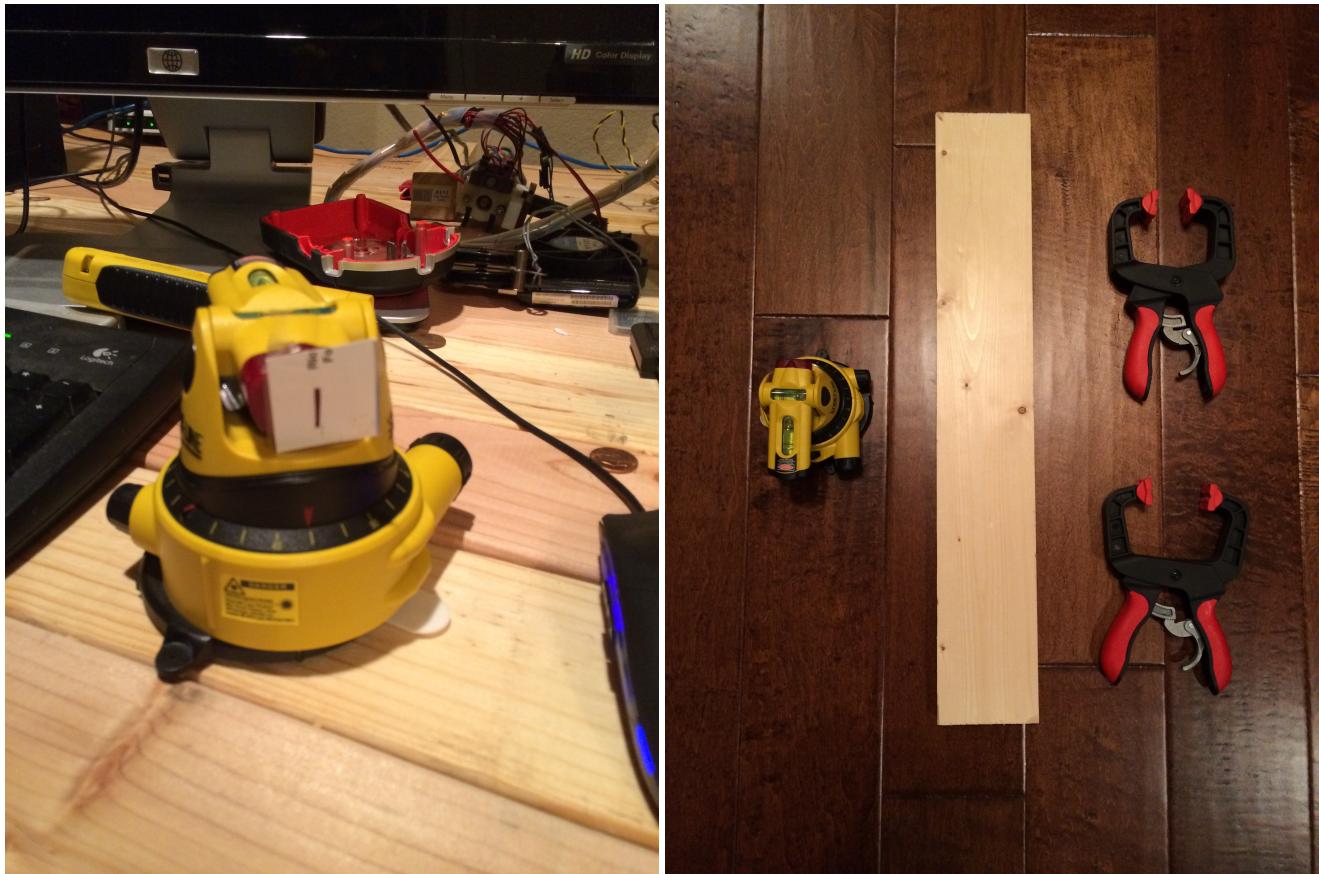


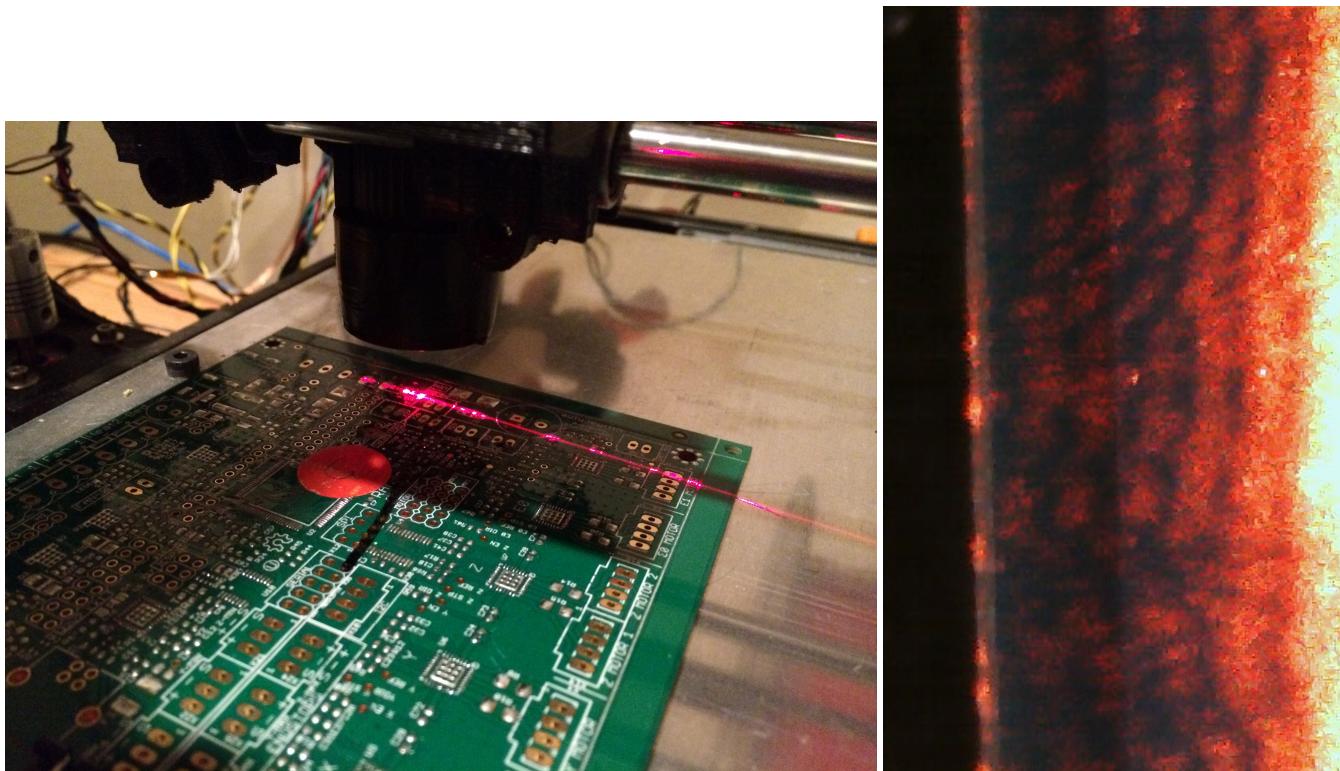




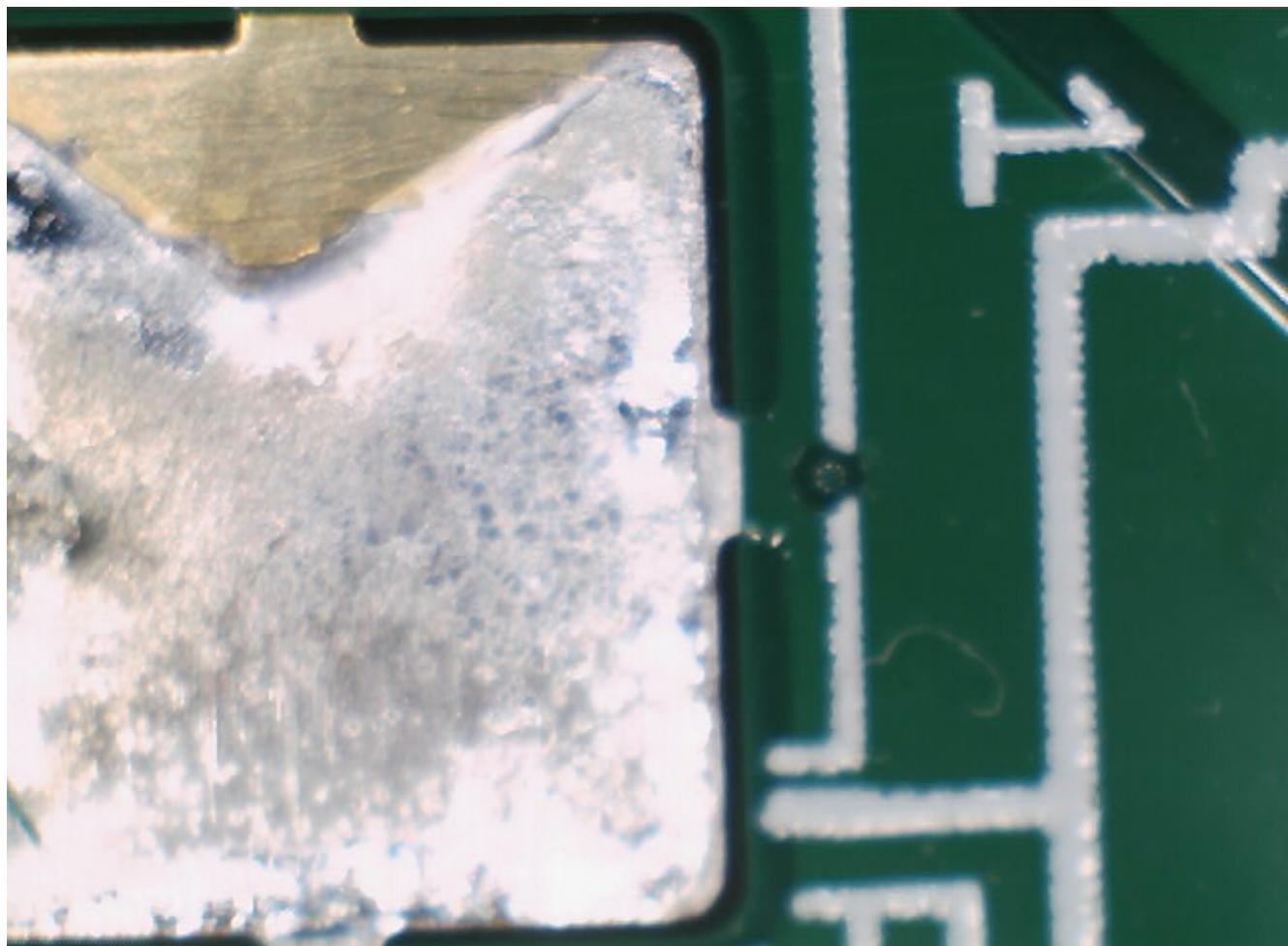


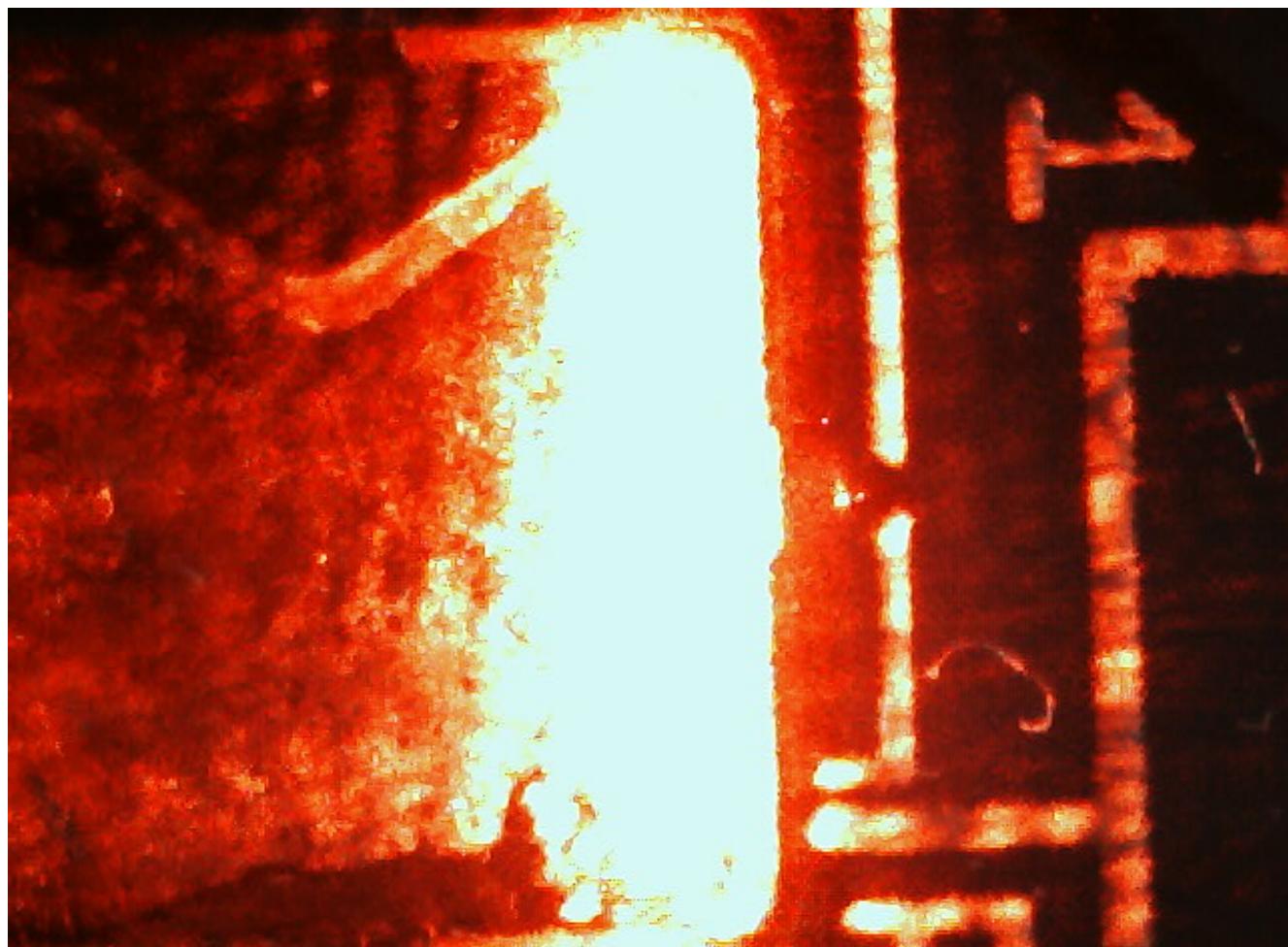


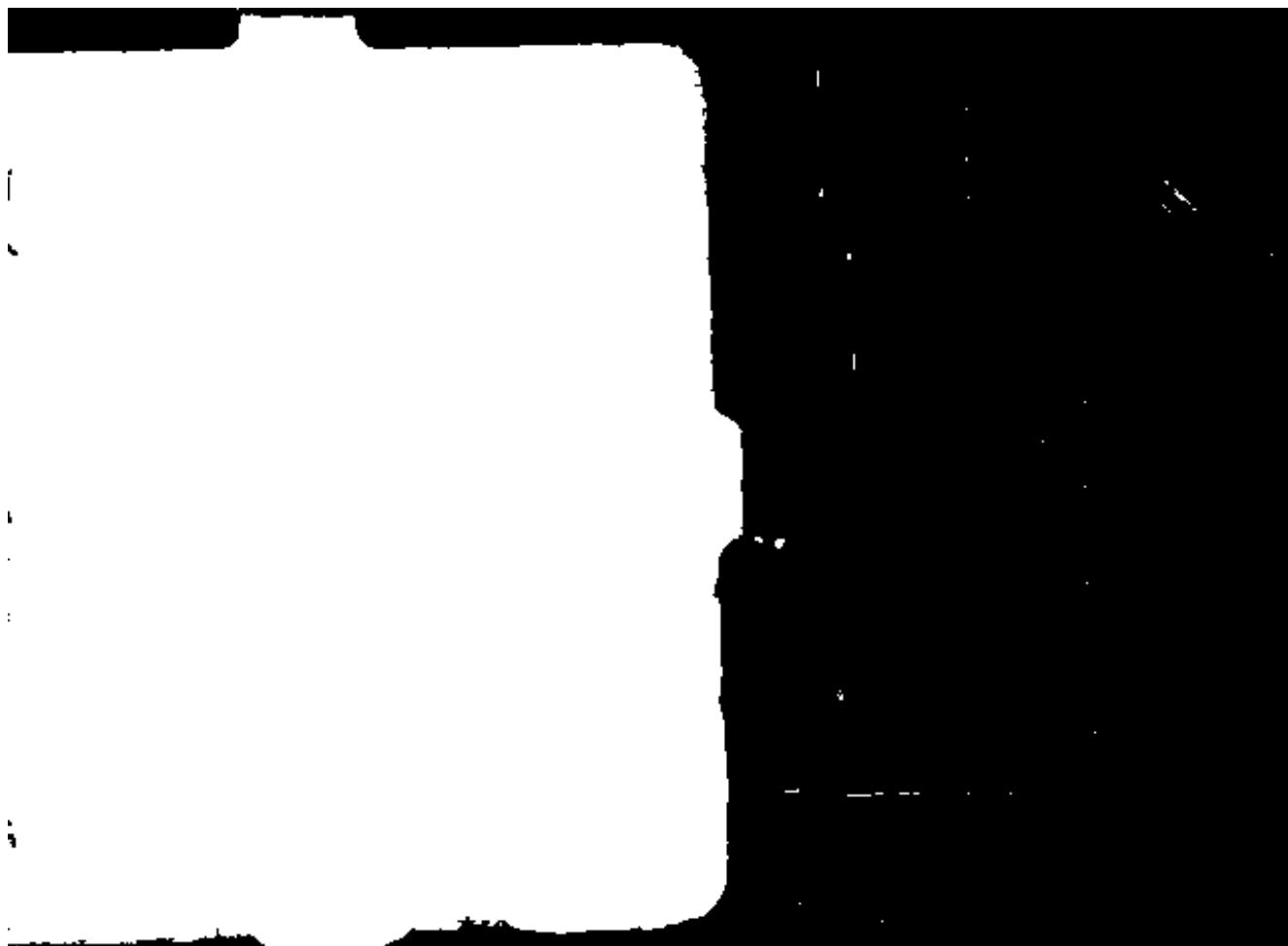




5 Volume Image Processing





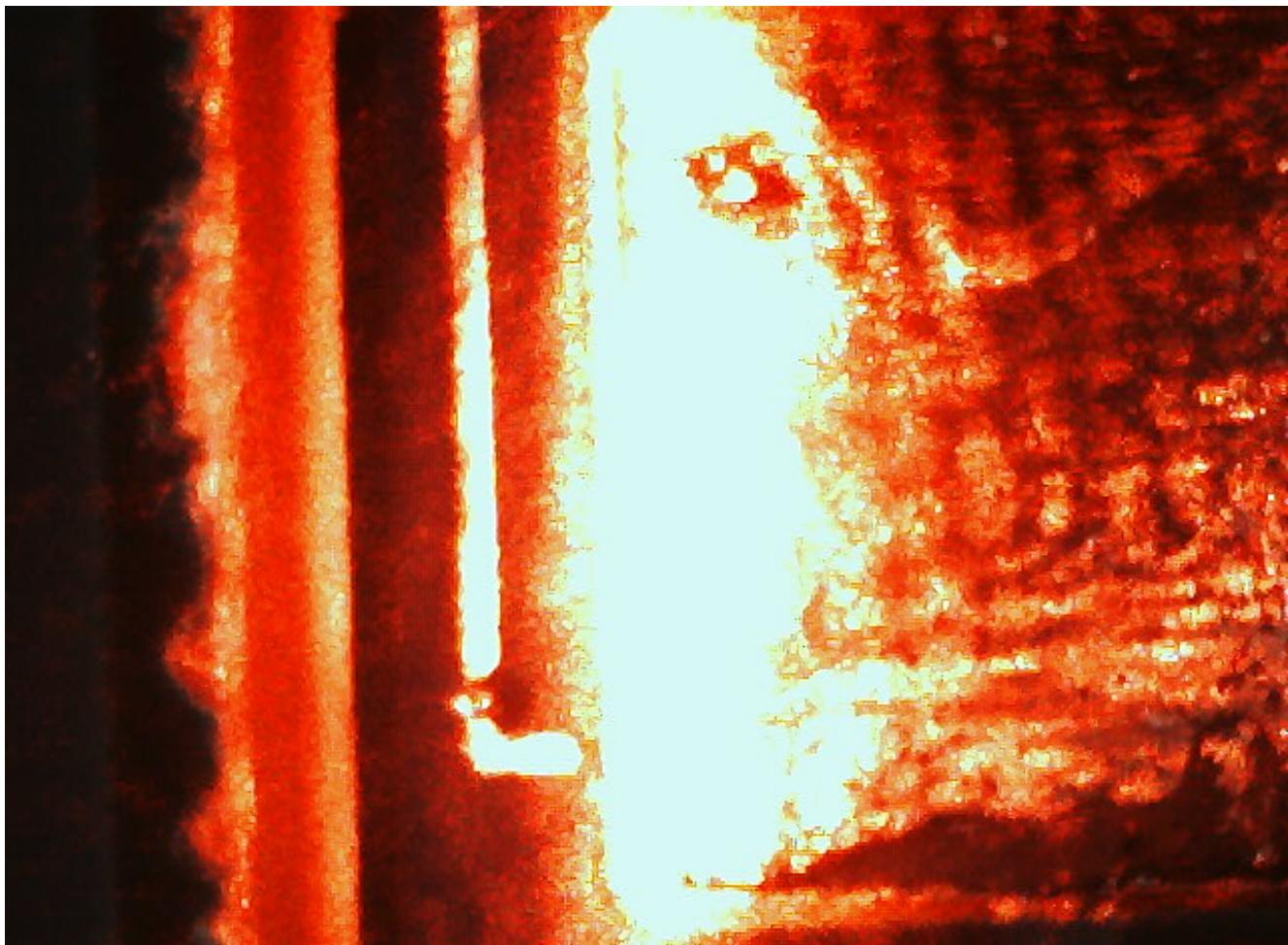






6 Volume Results

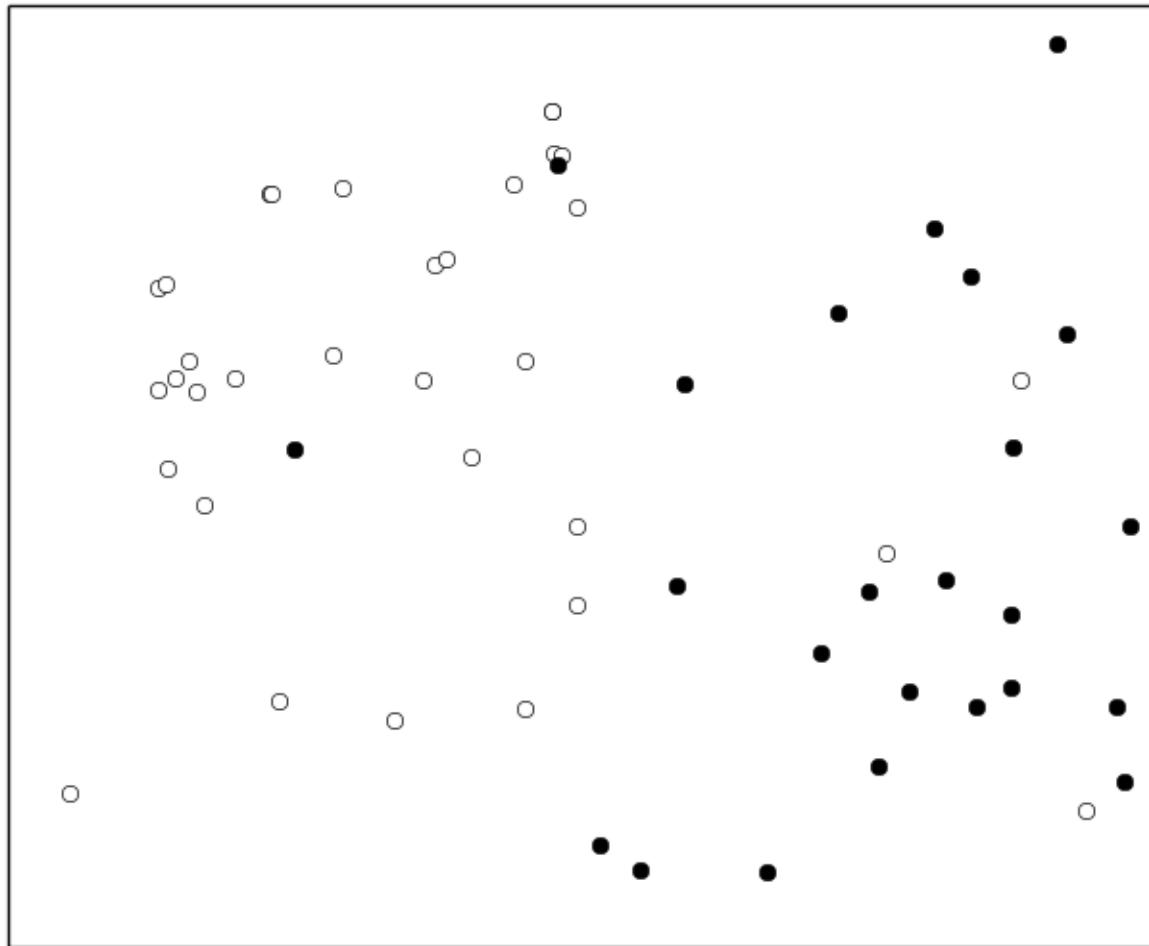






Notice how the top of the white blob is thinner than the middle. That is because the volume of solder at the top is less than the volume of solder at the middle. Also notice the black hole, this corresponds to a hole in the solder paste.

7 Classification



Linear: $u^T v$

RBF: $\exp(-\gamma|u-v|^2)$

Poly: $(\gamma u^T v + r)^d$

