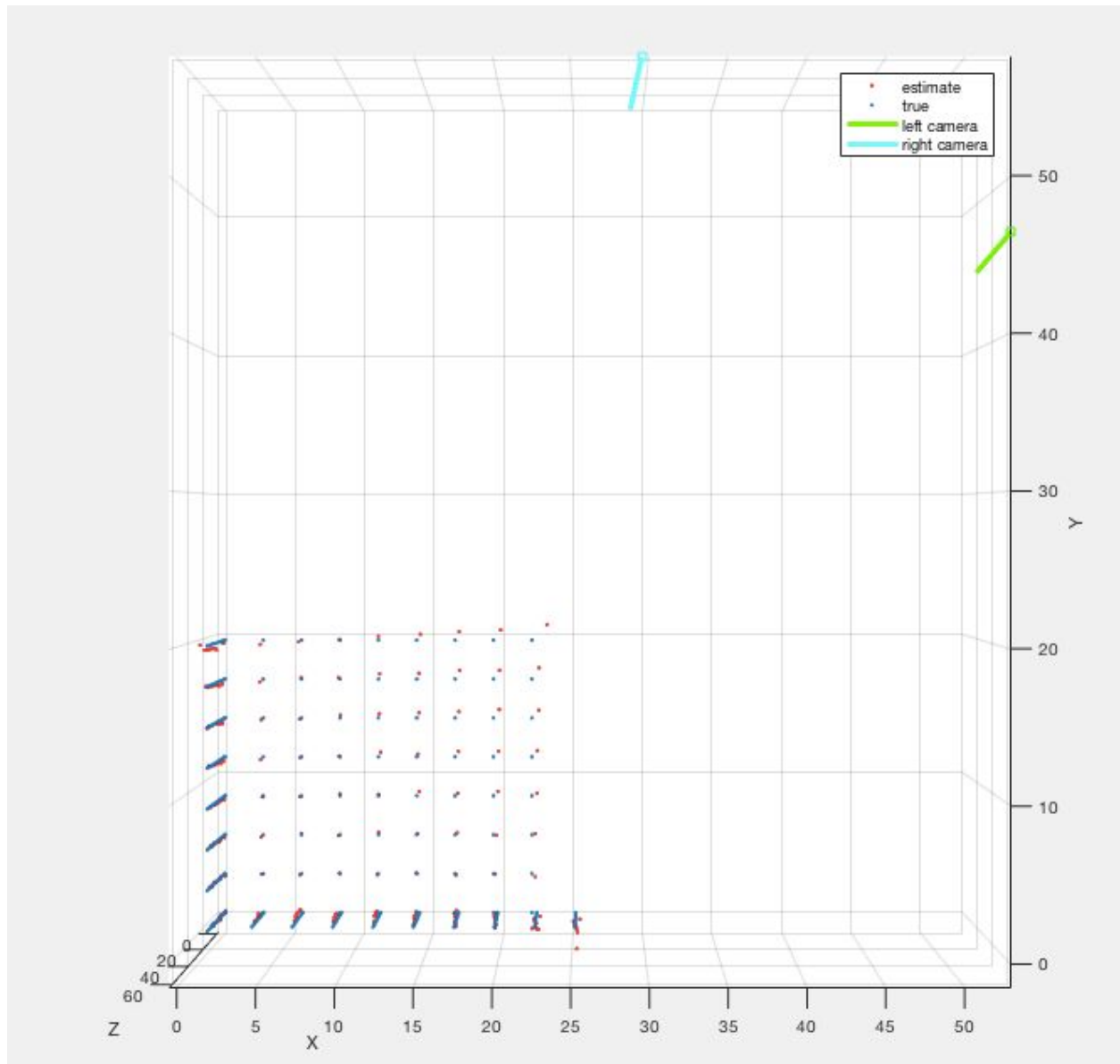
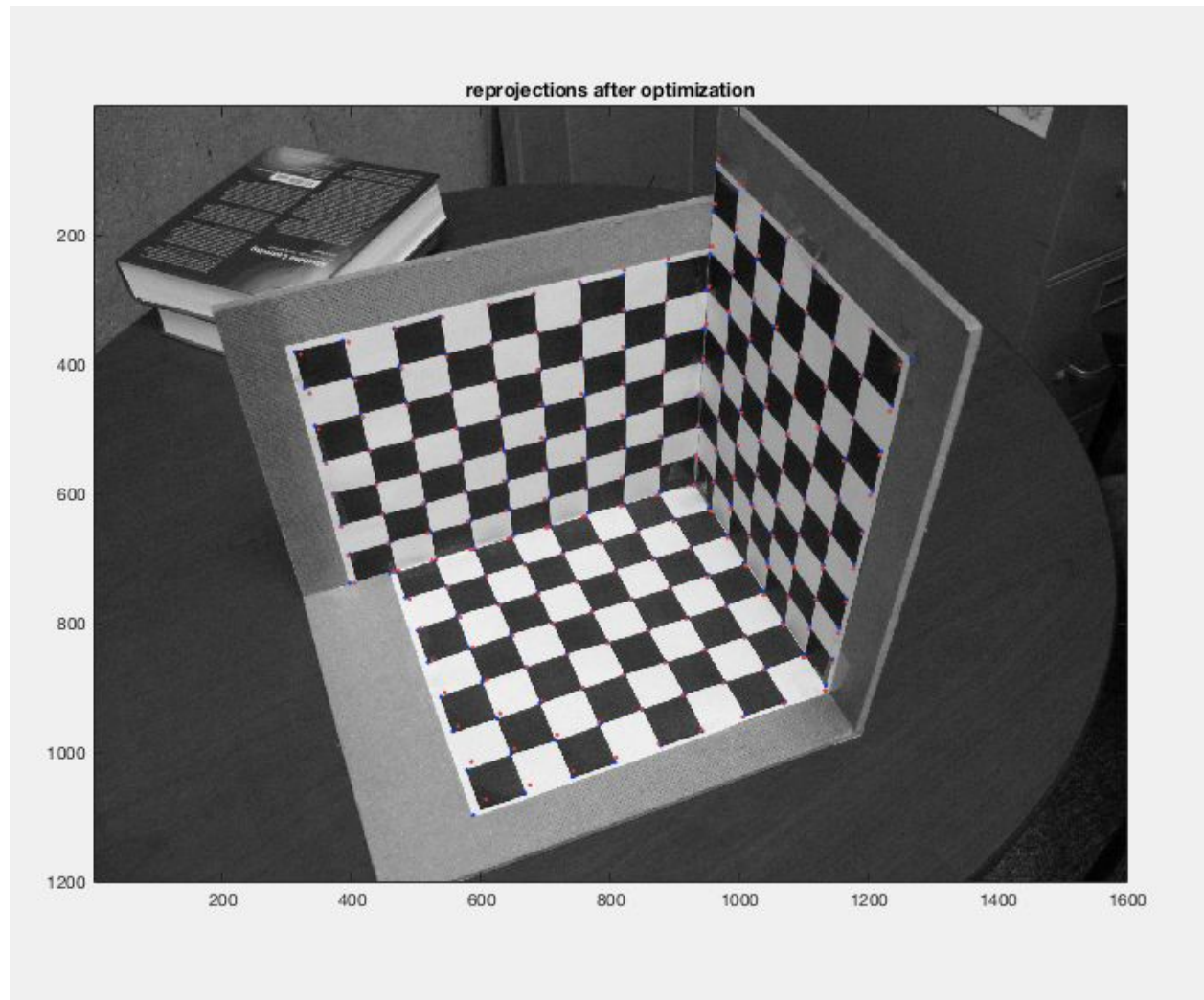


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HW #3 Writeup





1. Recovered parameters of the left camera:

- $f = 1.9635$
- $thx = 0.0054$
- $thy = 0.0026$
- $thz = -0.0006$
- $tx = 0.0530$
- $ty = 0.0465$
- $tz = 0.0637$

Recovered parameters of the right camera:

- $f = 1.9055$
- $thx = 0.0056$
- $thy = 0.0030$
- $thz = -0.0003$
- $tx = 0.0293$

- $t_y = 0.0575$
 - $t_z = 0.0625$
 - Baseline = 35.9049
2. Average Error came out to be 0.1798. The error must come from the harris detector's parameters since there will be errors when the spots are not detected on the corners and when the red circles are not clicked accurately.
 3. My recovered value of f was 1906.5 pixels.
Focal length = (focal pixel * sensor width) / image width
 $= (1906.5 * 5.75) / 800$
 $= 13.70 \text{ mm}$
Since the focal length came out to be 13.70 mm, it is a reasonable match to Canon's published range.