

LIDAR Testing 12/16/15

Experiment 1 had the following conditions:

- Physical setup as seen in Figure 1.
- Data recorded in the files seen in Figure 2.
- Lighting was exclusively the lab overhead lighting, but the area was mostly in shade, as seen in Figure 1.
- 10 full scans were recorded. Theta ranges from 0-180 degrees no grouped datapoints, Phi ranges from 0 (vertical) to -90 (horizontal) and changes in 10 degree increments.

Experiment 2 had the following conditions:

- Physical layout as seen in Figure 3.
- Data stored in files shown in Figure 4.
- Lighting is the same as in experiment 1, except the scan area is not in shadow.
- 10 full scans were recorded, using the same variables as in experiment 1.

Experiment 3 had the following conditions:

- Experiment conditions were the same as experiment 2, except LIDAR scanner was raised an additional 267mm off the floor.
- Data recorded in the files shown in figure 5.

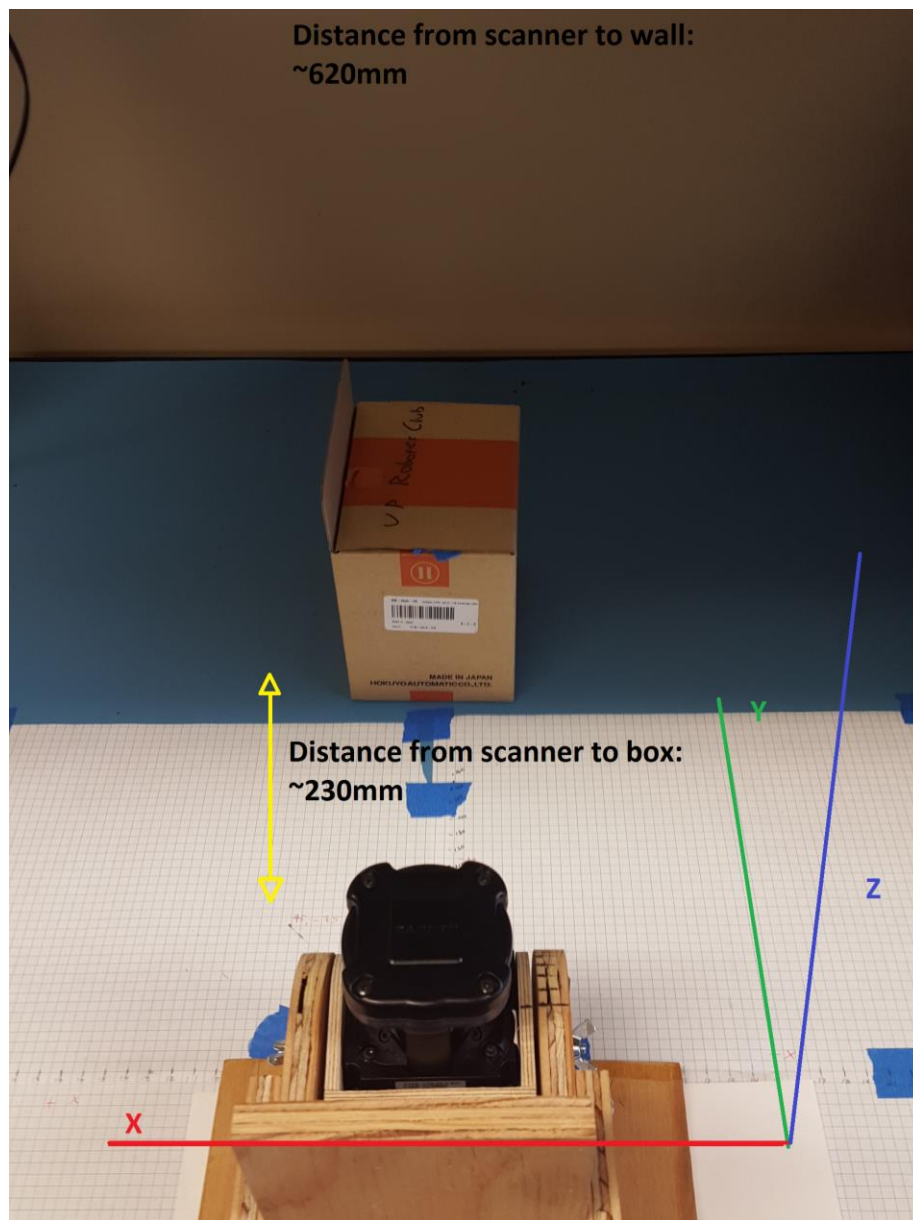





Figure 1 – experiment 1 setup




test_vectors_2015_12_16_14_53_4




test_vectors_2015_12_16_14_53_42




test_vectors_2015_12_16_14_54_6




test_vectors_2015_12_16_14_54_30




test_vectors_2015_12_16_14_54_52




test_vectors_2015_12_16_14_55_22




test_vectors_2015_12_16_14_55_48



test_vectors_2015_12_16_14_56_12



test_vectors_2015_12_16_14_56_34



test_vectors_2015_12_16_14_56_57

Figure 2 – experiment 1 files



Figure 3 – experiment 2 setup

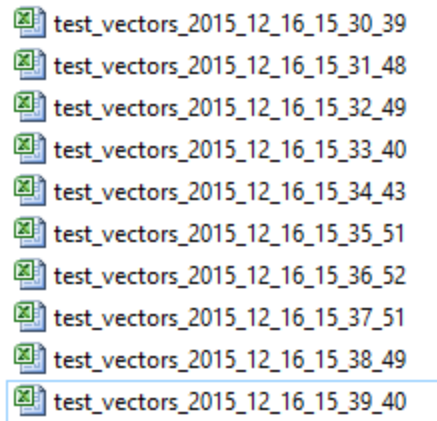


Figure 4 – experiment 2 files

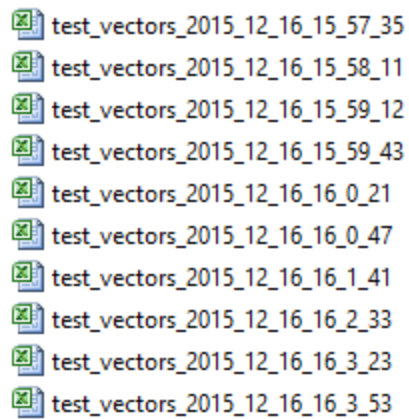


Figure 5 – experiment 3 files