

Accuracy of Basler ToF Camera

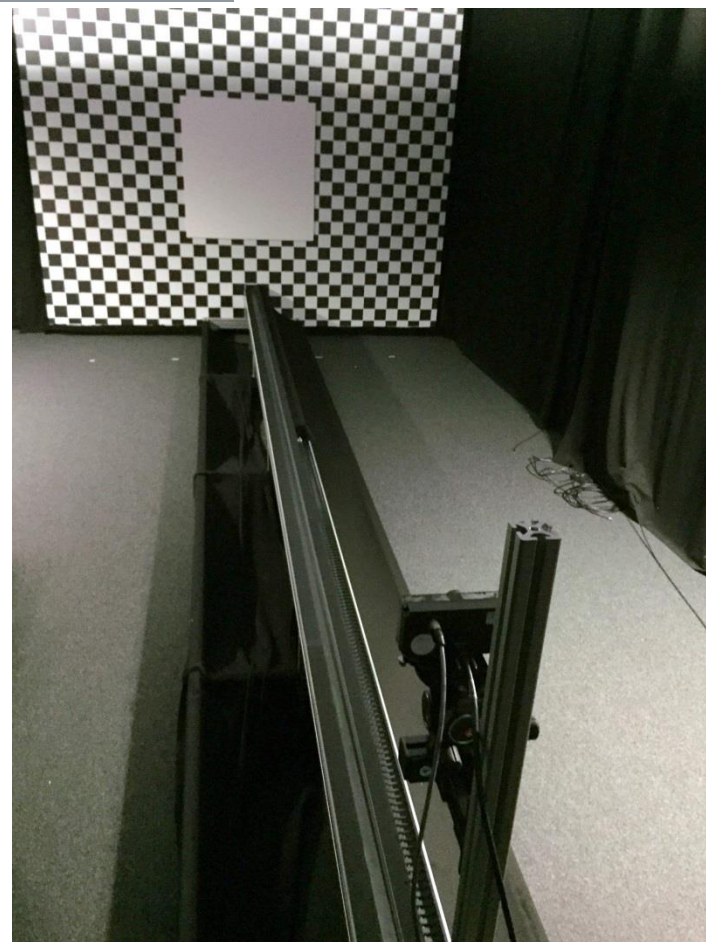
July 2016





Measurement Conditions

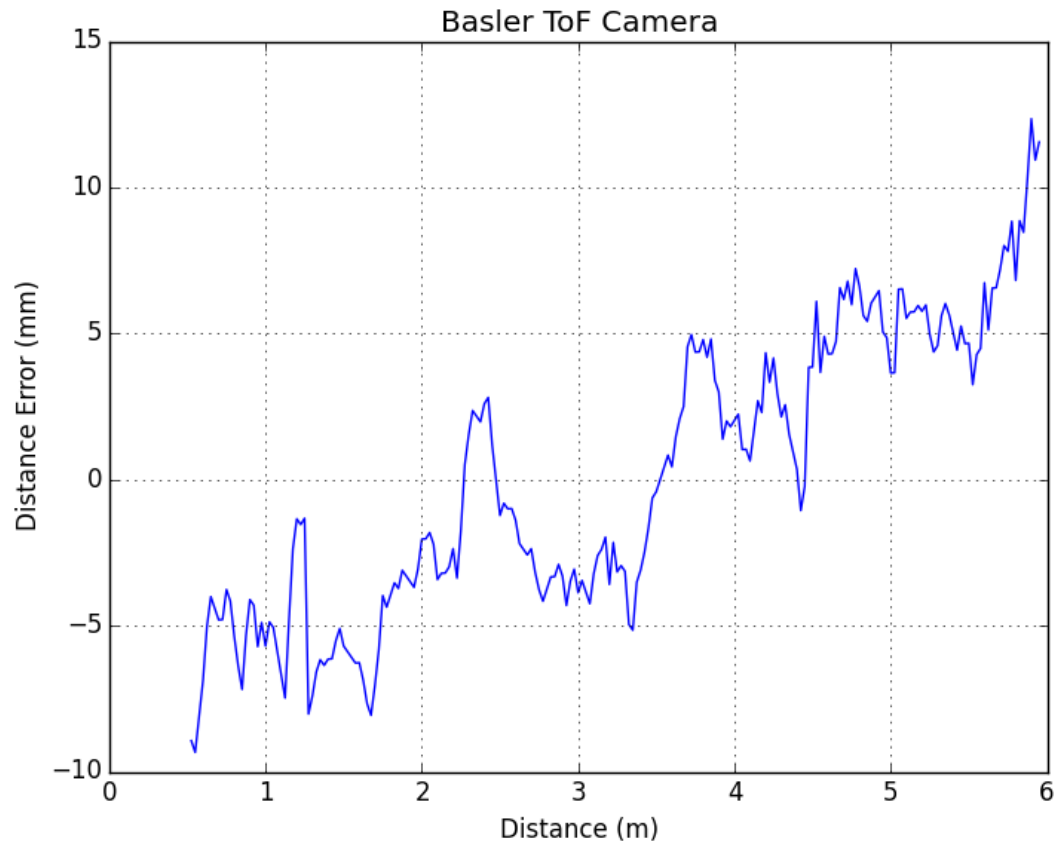
- Sheet of white paper
- Camera model 107002-07 with factory default settings
- 0.1 mm accurate positioning
- 22°C room temperature
- 20 minutes camera warm-up time
- No ambient light
- 40x40 pixels in the center of the range map
- 25 images





Accuracy

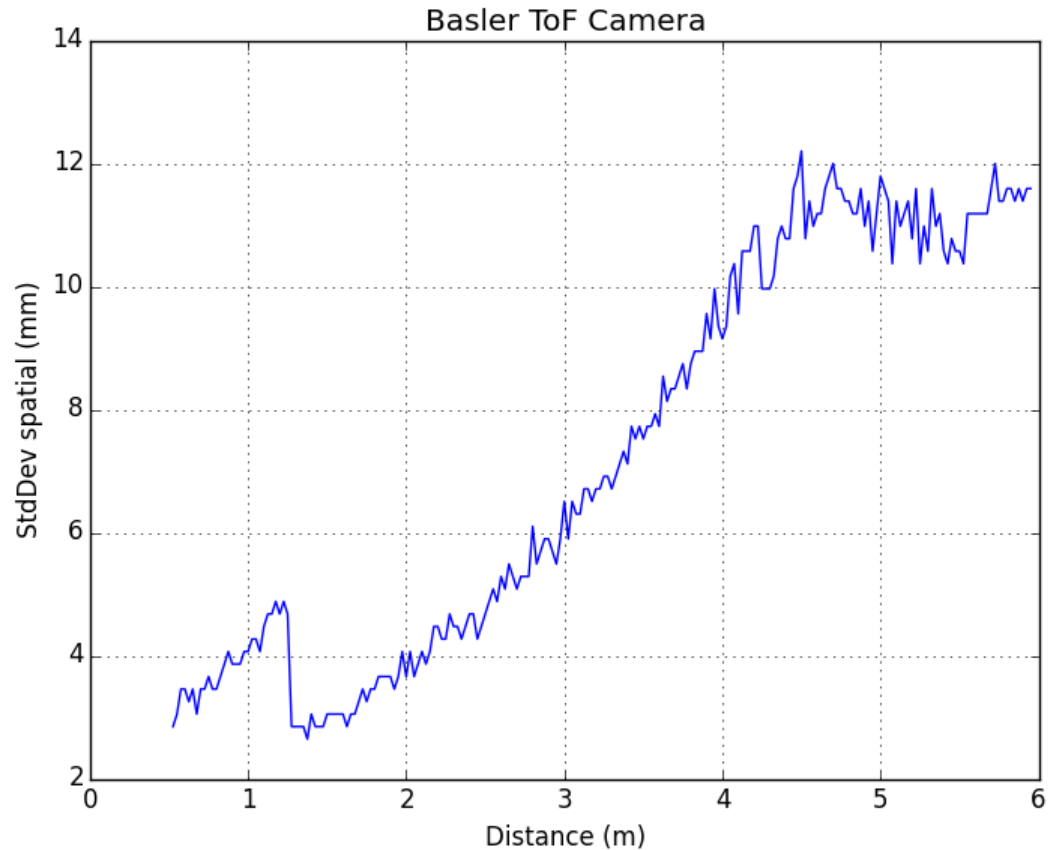
- Difference between measured and true distance
- 40 x 40 pixels
- 25 images
- Sensor center
- Offset adjusted for 3.5 m
- Result: +/- 10 mm within 0.5 to 5.8m





Spatial Noise

- Standard deviation of 40 x 40 pixels
- 1σ
- Result: <12 mm





Temporal Noise

- Standard deviation of 25 images
- 1σ
- Result: <10 mm

