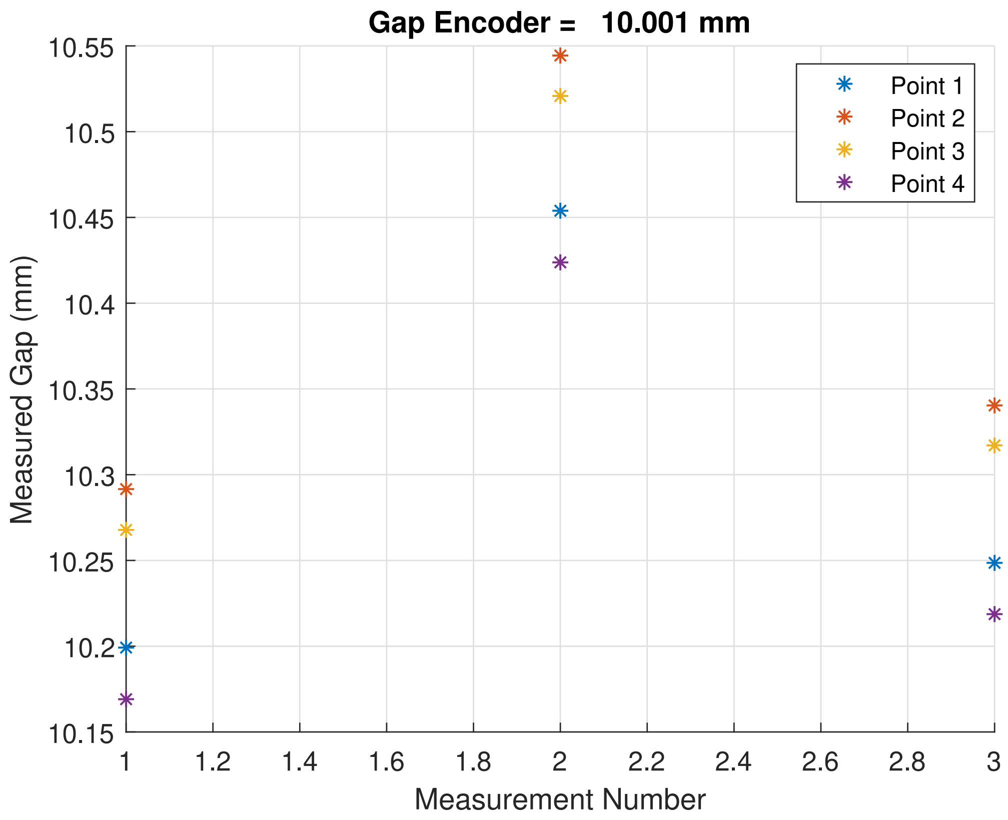
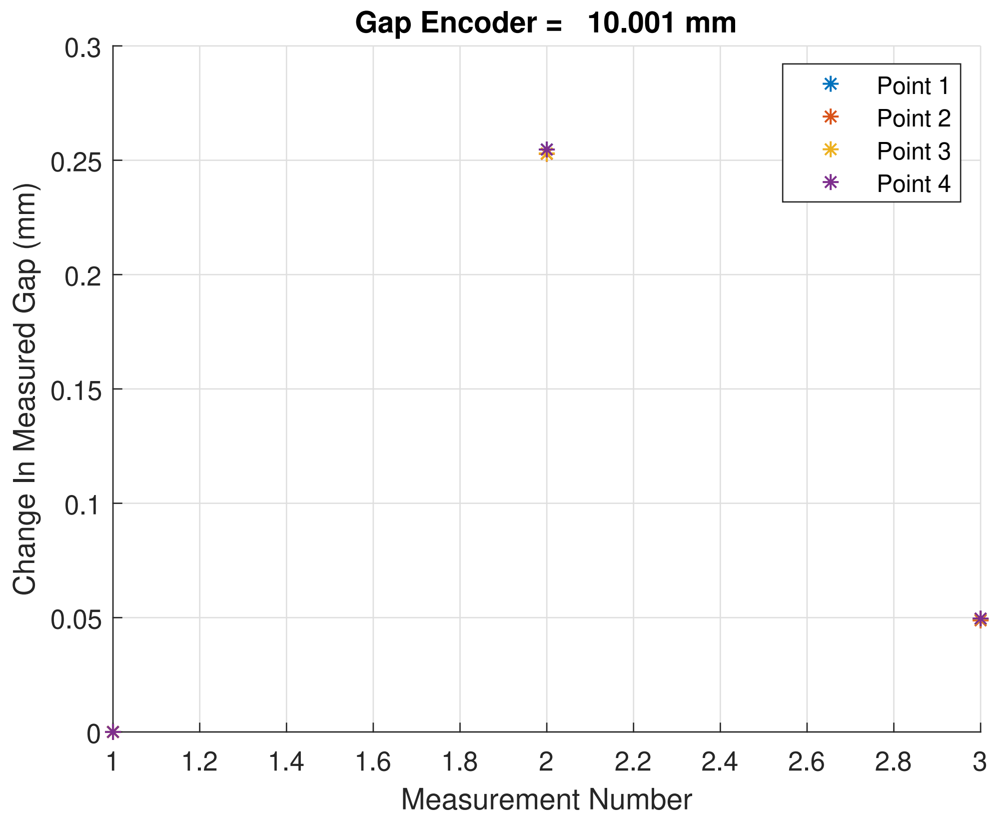
SLAC Magnetic Measurements
Undulator Analysis Comparison

Title:
SXPS-16340 CMM Measurements

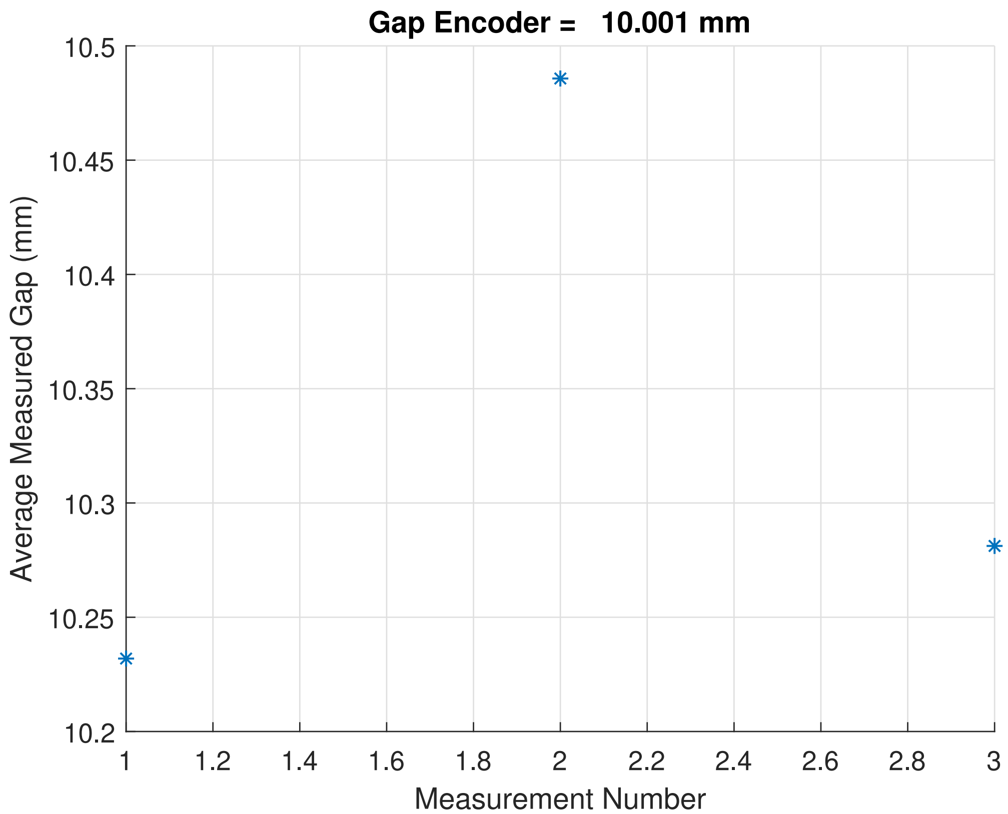
Input Files:
1) S:\magdata\LCLS-II\Phase Shifter\SXPS_16340\DATASET0002\Final Results\Gap Measurements\Touch Probe\PHASE GAP TEST 16340-1.txt
2) S:\magdata\LCLS-II\Phase Shifter\SXPS_16340\DATASET0002\Final Results\Gap Measurements\Touch Probe\PHASE GAP TEST 16340-2.txt
3) S:\magdata\LCLS-II\Phase Shifter\SXPS_16340\DATASET0002\Final Results\Gap Measurements\Touch Probe\PHASE GAP TEST 16340-4.txt

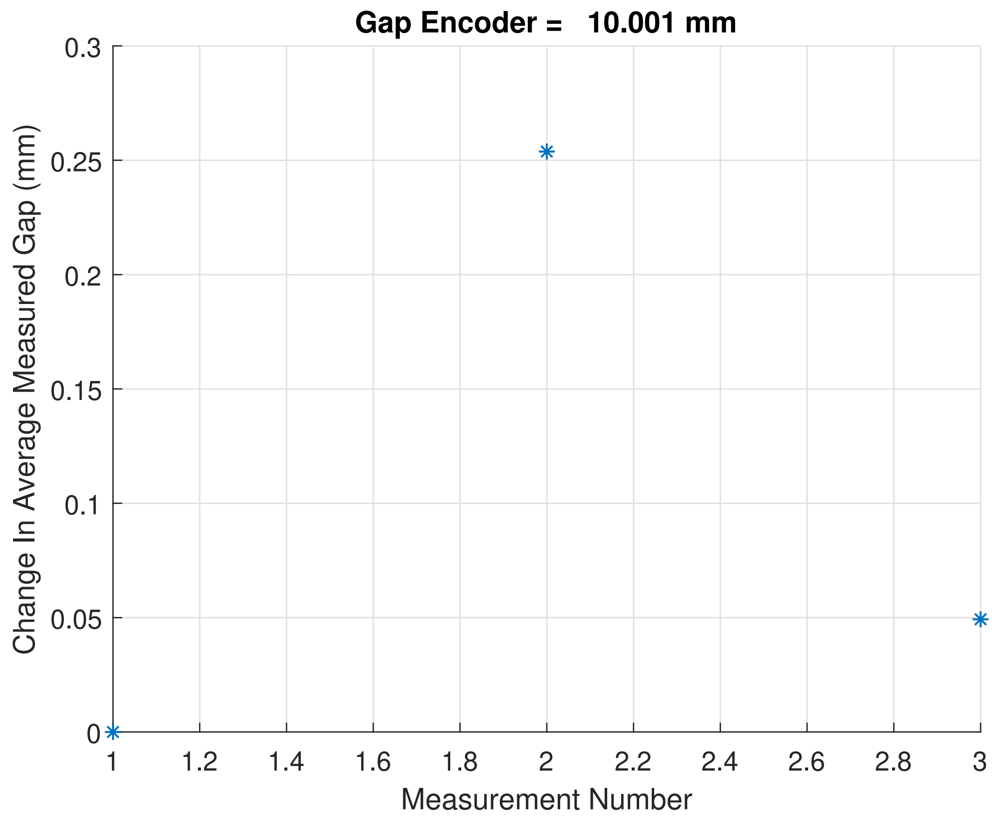


Gap Encoder = 10.001 mm
10.55
10.5
10.45
10.4
10.35
10.3
10.25
10.2
10.15
Measured Gap (mm)
1
1.2
1.4
1.6
1.8
2
2.2
2.4
2.6
2.8
3
Measurement Number
Point 1
Point 2
Point 3
Point 4

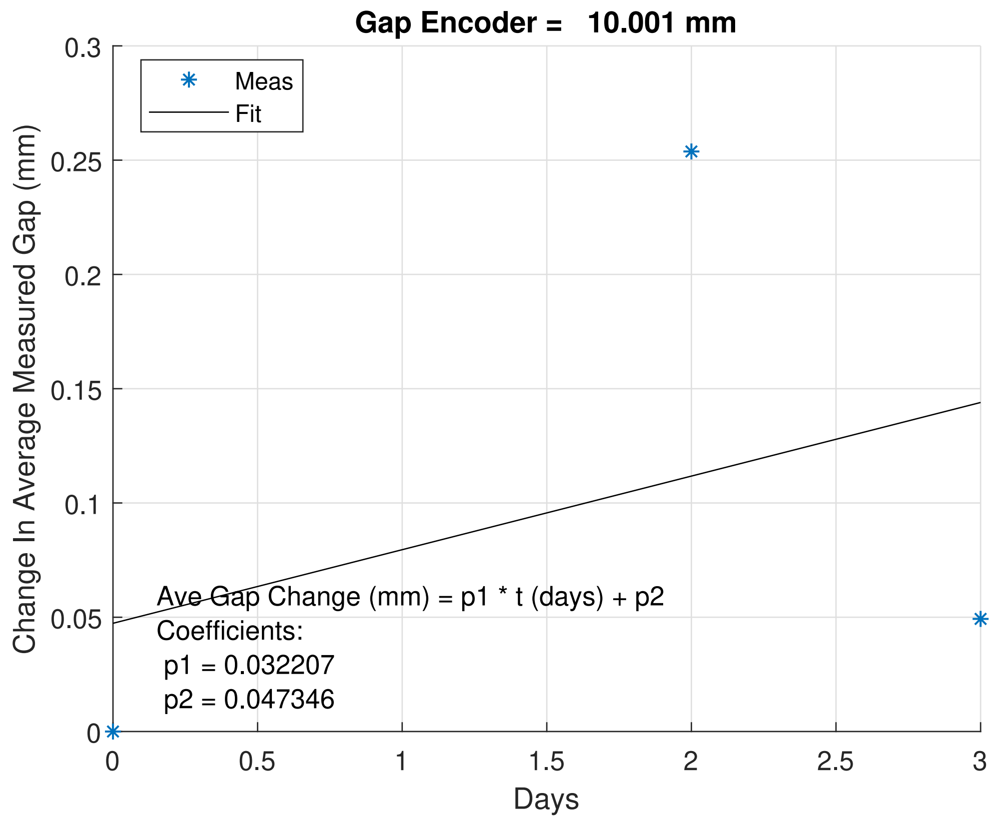


Gap Encoder = 10.001 mm
Change In Measured Gap (mm)
0
0.05
0.1
0.15
0.2
0.25
0.3
1
1.2
1.4
1.6
1.8
2
2.2
2.4
2.6
2.8
3
Measurement Number
Point 1
Point 2
Point 3
Point 4

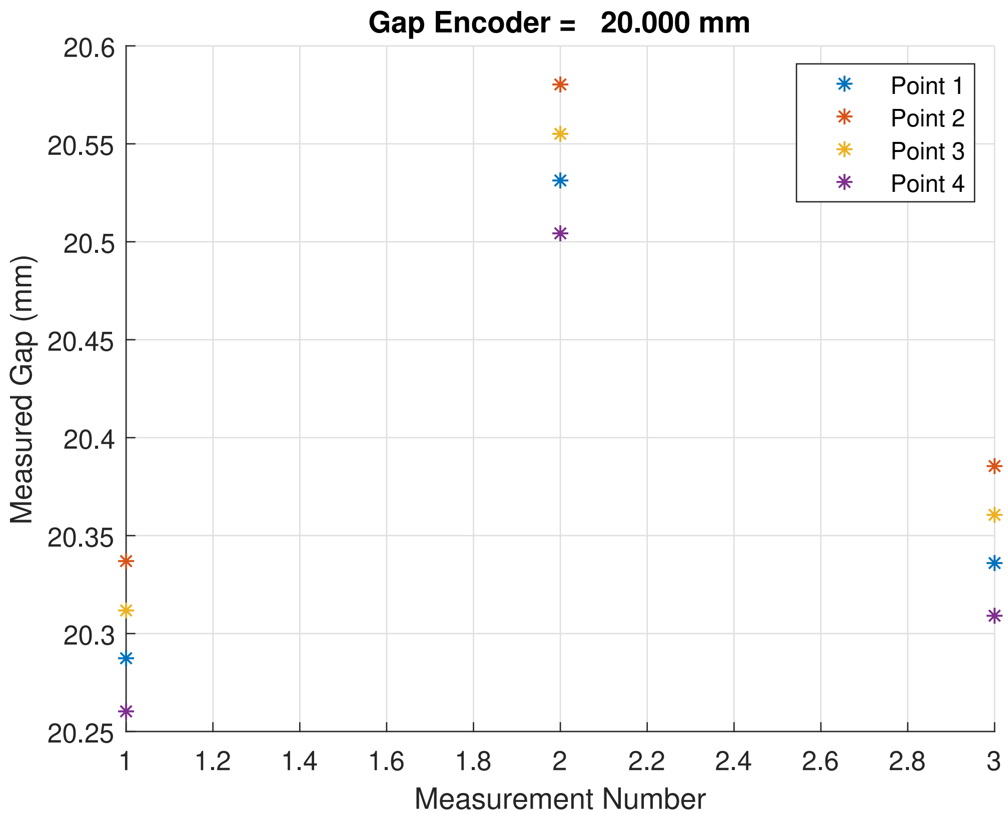

Gap Encoder = 10.001 mm
Average Measured Gap (mm)
10.5
10.45
10.4
10.35
10.3
10.25
10.2
1
1.2
1.4
1.6
1.8
2
2.2
2.4
2.6
2.8
3
Measurement Number



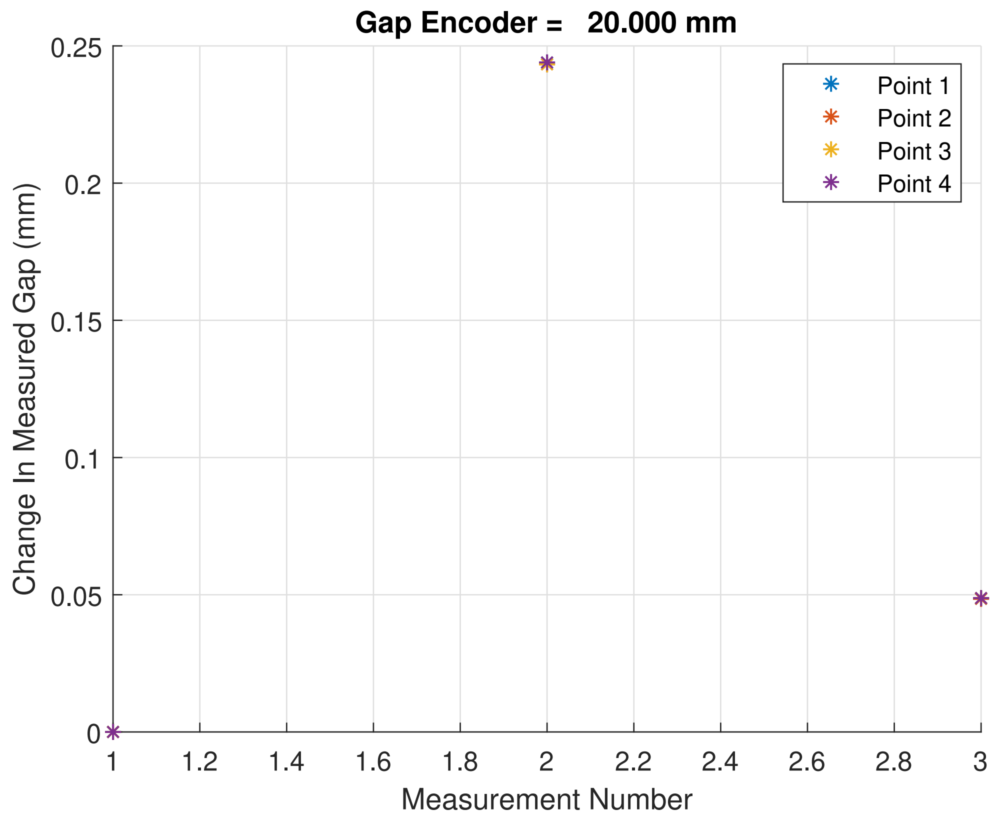
Gap Encoder = 10.001 mm
Change In Average Measured Gap (mm)
Measurement Number
0
0.05
0.1
0.15
0.2
0.25
0.3
1
1.2
1.4
1.6
1.8
2
2.2
2.4
2.6
2.8
3

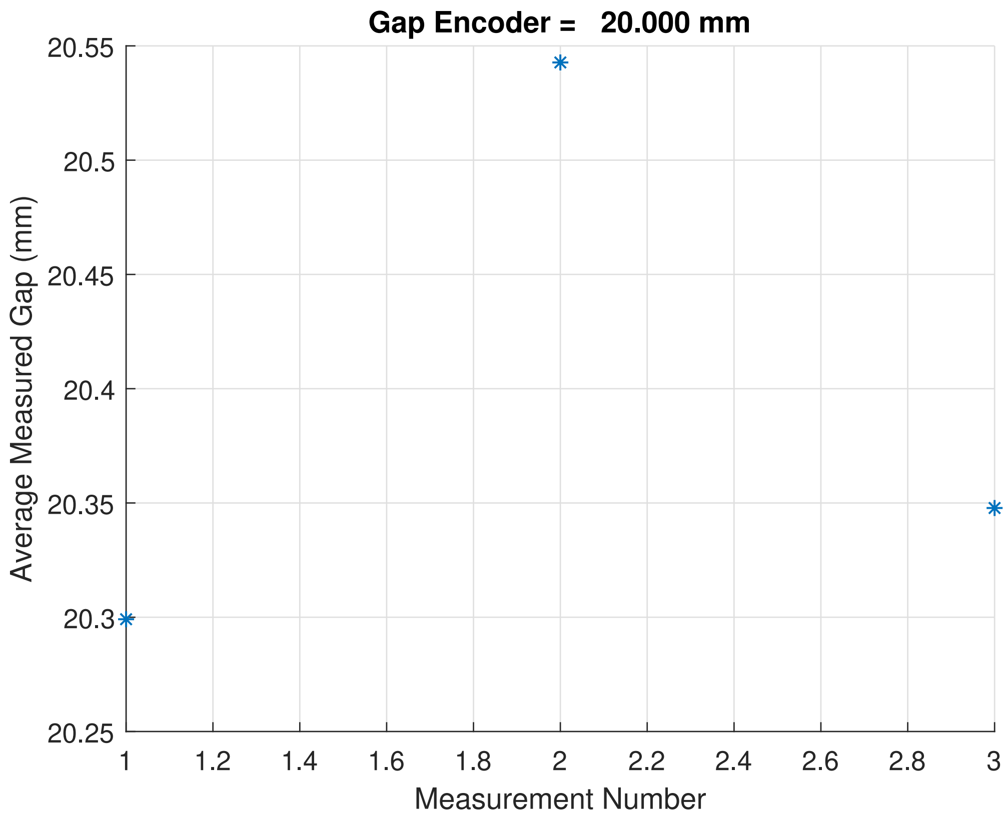


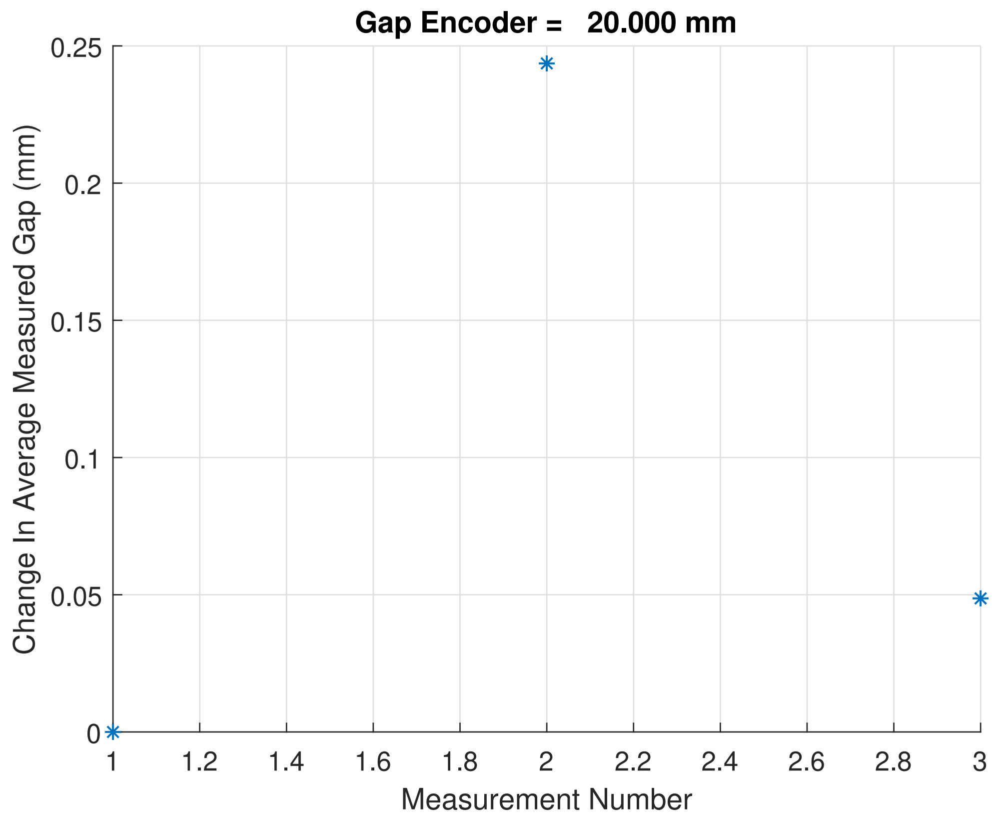
Gap Encoder = 10.001 mm
Meas
Fit
Change In Average Measured Gap (mm)
0.3
0.25
0.2
0.15
0.1
0.05
0
0
0.5
1
1.5
2
2.5
3
Days
Ave Gap Change (mm) = p1 * t (days) + p2
Coefficients:
p1 = 0.032207
p2 = 0.047346

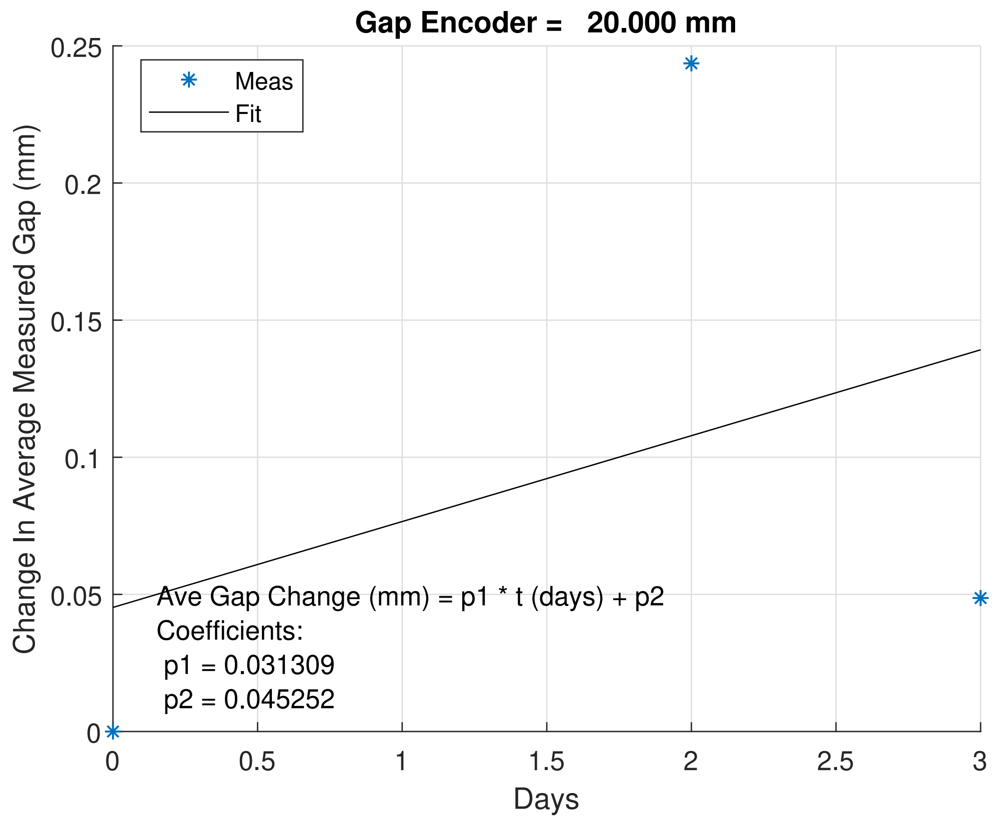


Gap Encoder = 20.000 mm
Measured Gap (mm)
Measurement Number
Point 1
Point 2
Point 3
Point 4
20.6
20.55
20.5
20.45
20.4
20.35
20.3
20.25
1
1.2
1.4
1.6
1.8
2
2.2
2.4
2.6
2.8
3


Gap Encoder = 20.000 mm
0.25
0.2
0.15
0.1
0.05
0
Change In Measured Gap (mm)
1
1.2
1.4
1.6
1.8
2
2.2
2.4
2.6
2.8
3
Measurement Number
Point 1
Point 2
Point 3
Point 4


Gap Encoder = 20.000 mm
Average Measured Gap (mm)
20.55
20.5
20.45
20.4
20.35
20.3
20.25
1
1.2
1.4
1.6
1.8
2
2.2
2.4
2.6
2.8
3
Measurement Number


Gap Encoder =   20.000 mm
Change In Average Measured Gap (mm)
0.25
0.2
0.15
0.1
0.05
0
1
1.2
1.4
1.6
1.8
2
2.2
2.4
2.6
2.8
3
Measurement Number



Gap Encoder = 20.000 mm
Meas
Fit
Ave Gap Change (mm) = p1 * t (days) + p2
Coefficients:
p1 = 0.031309
p2 = 0.045252
Change In Average Measured Gap (mm)
Days
0
0.05
0.1
0.15
0.2
0.25
0
0.5
1
1.5
2
2.5
3