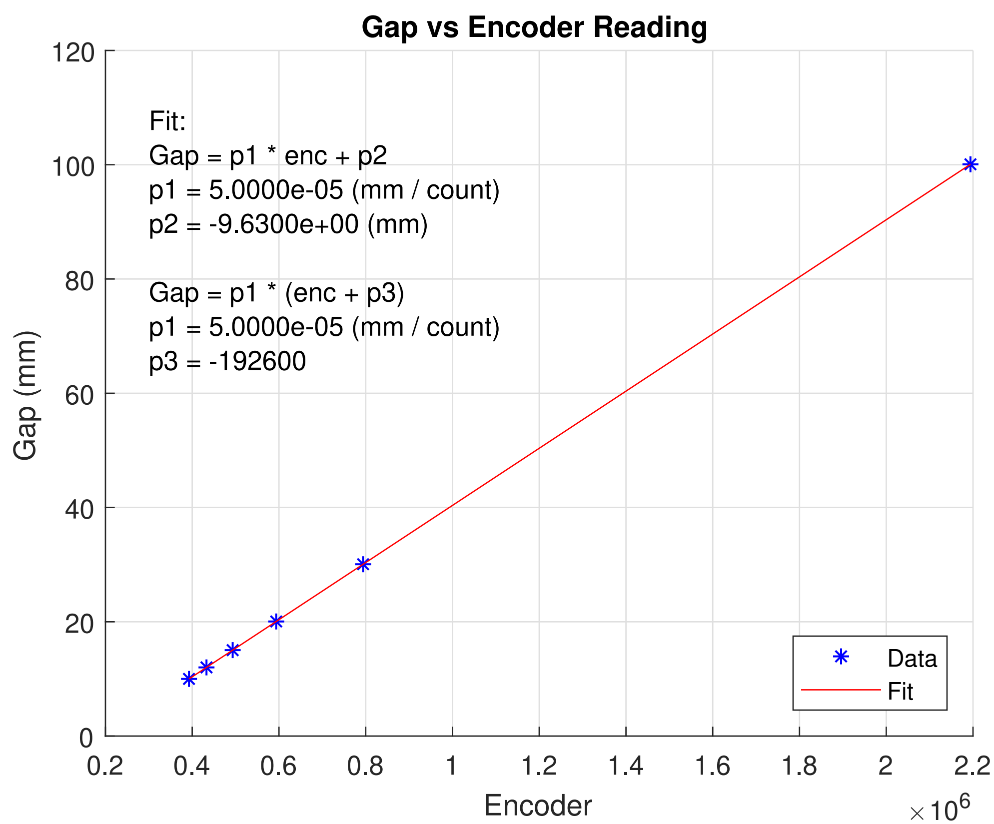
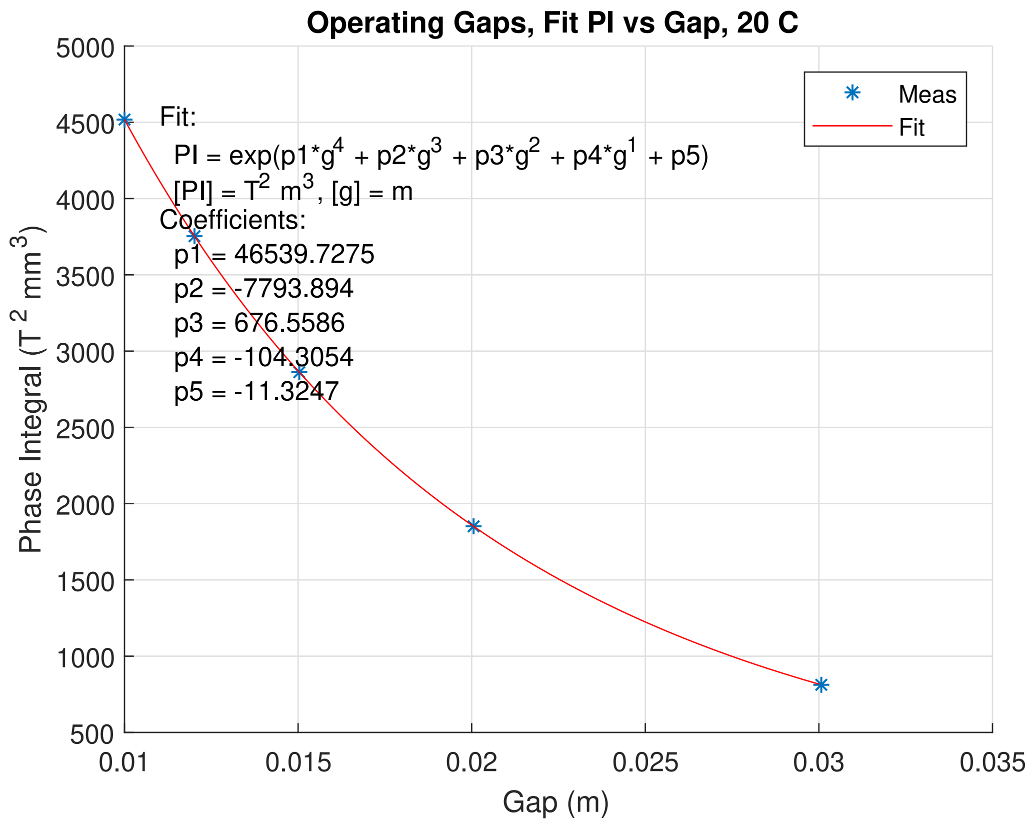
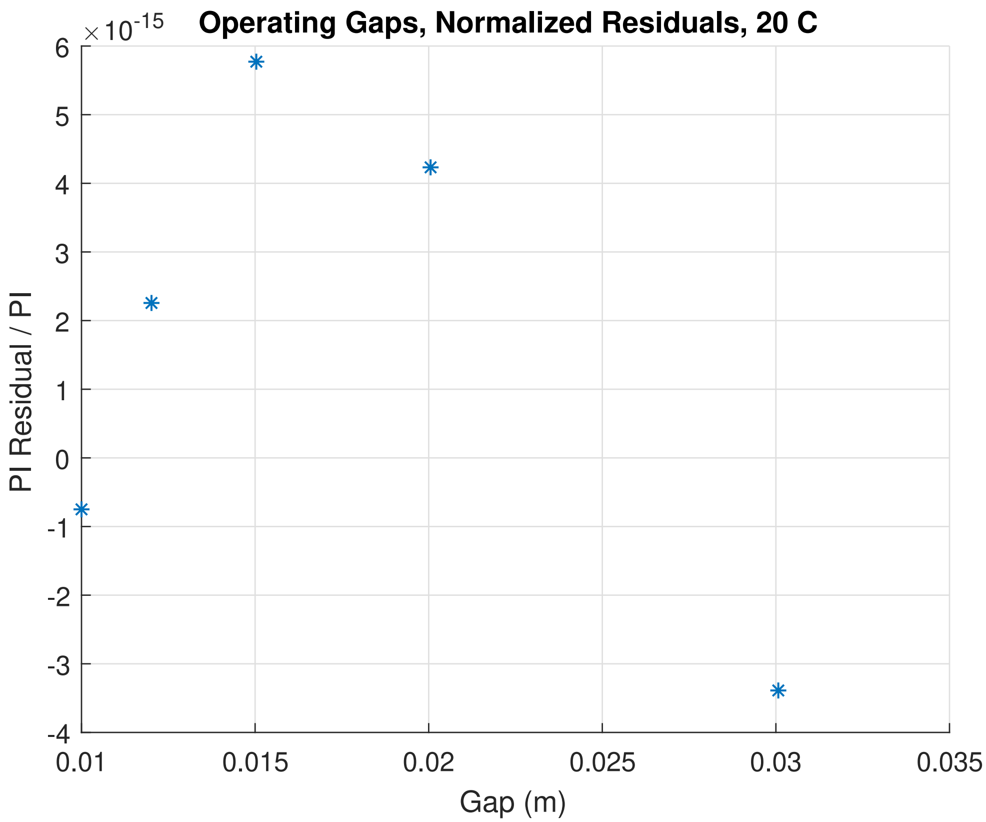
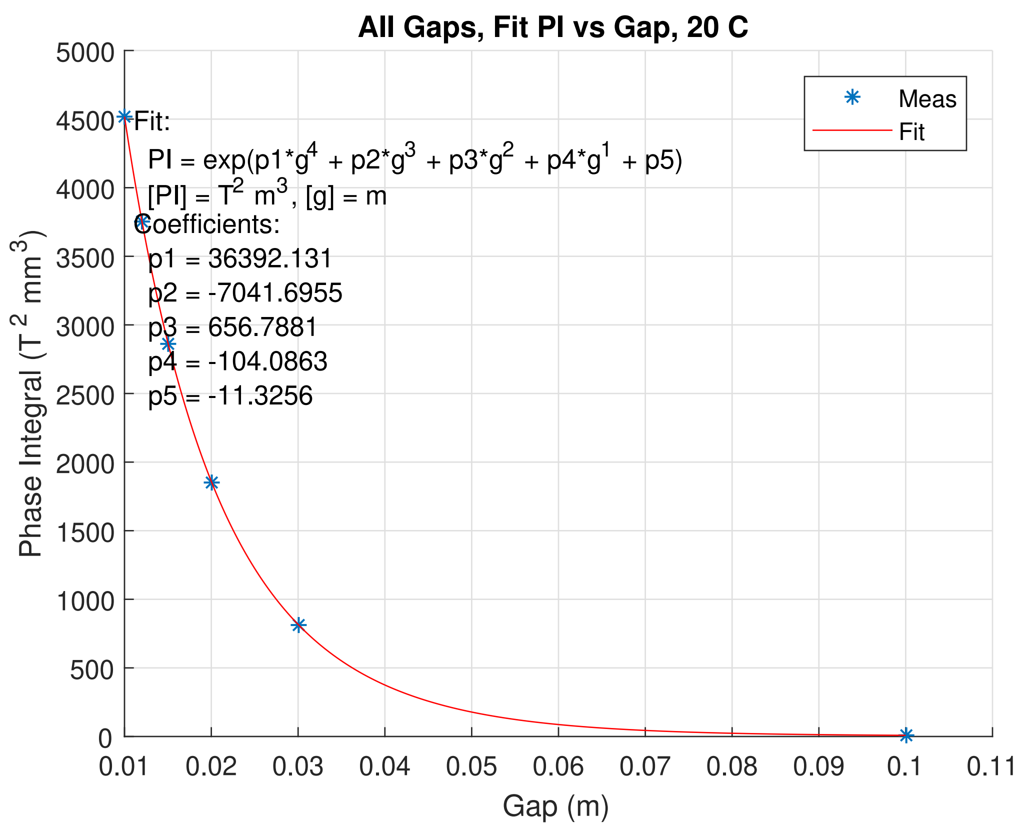
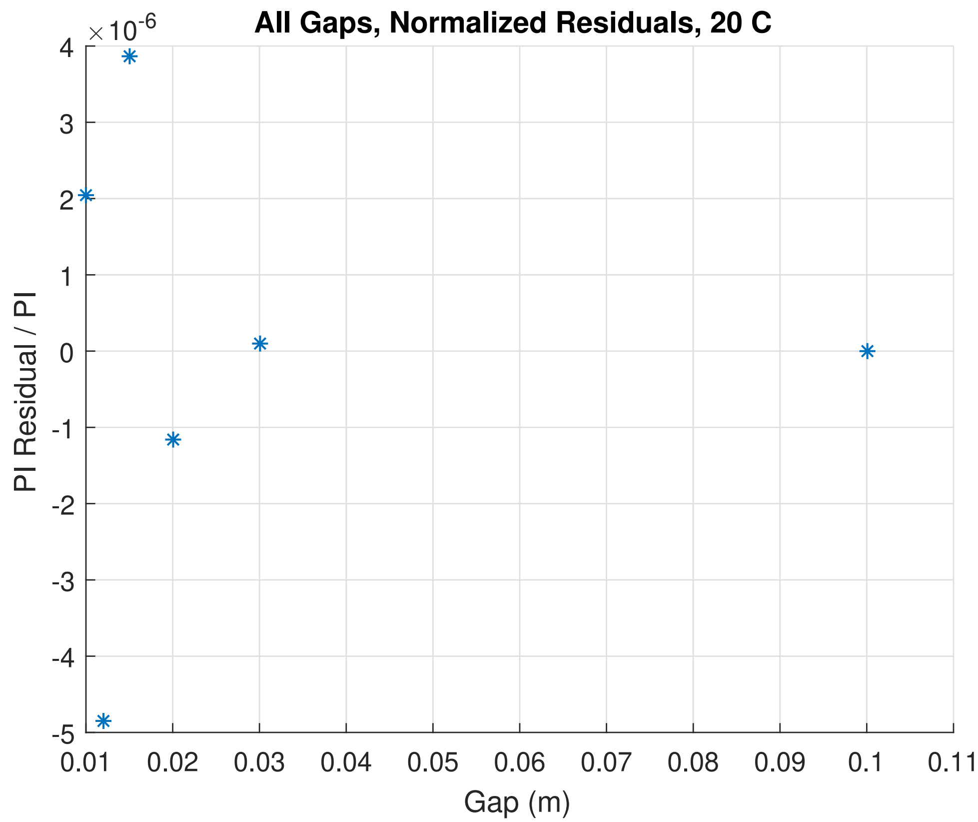
SLAC Magnetic Measurements#
Date: 08-19-2017#
Time: 11:11:43#

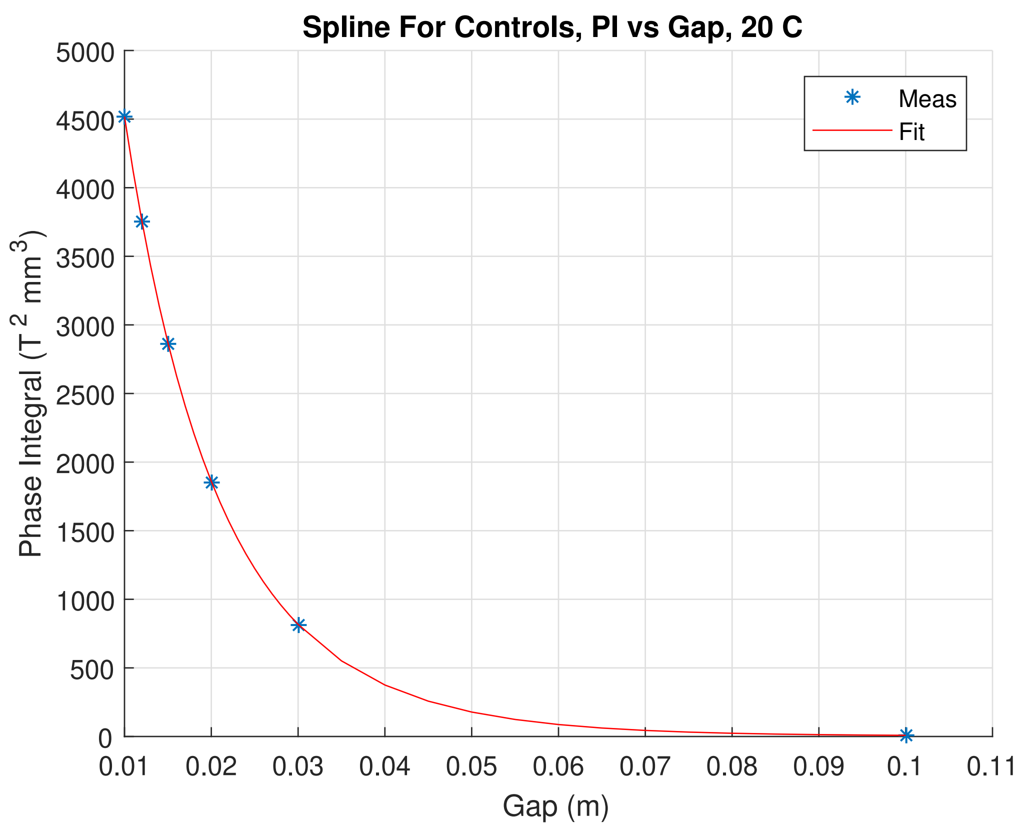

Gap vs Encoder Reading
Fit:
Gap = p1 * enc + p2
p1 = 5.0000e-05 (mm / count)
p2 = -9.6300e+00 (mm)
Gap = p1 * (enc + p3)
p1 = 5.0000e-05 (mm / count)
p3 = -192600
Data
Fit
Gap (mm)
Encoder
×10^6
0
20
40
60
80
100
120
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
2.2


Operating Gaps, Fit PI vs Gap, 20 C
Phase Integral (T 2 mm3)
Gap (m)
Meas
Fit
Fit:
PI = exp(p1*g4 + p2*g3 + p3*g2 + p4*g1 + p5)
[PI] = T2 m3, [g] = m
Coefficients:
p1 = 46539.7275
p2 = -7793.894
p3 = 676.5586
p4 = -104.3054
p5 = -11.3247
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0.01
0.015
0.02
0.025
0.03
0.035

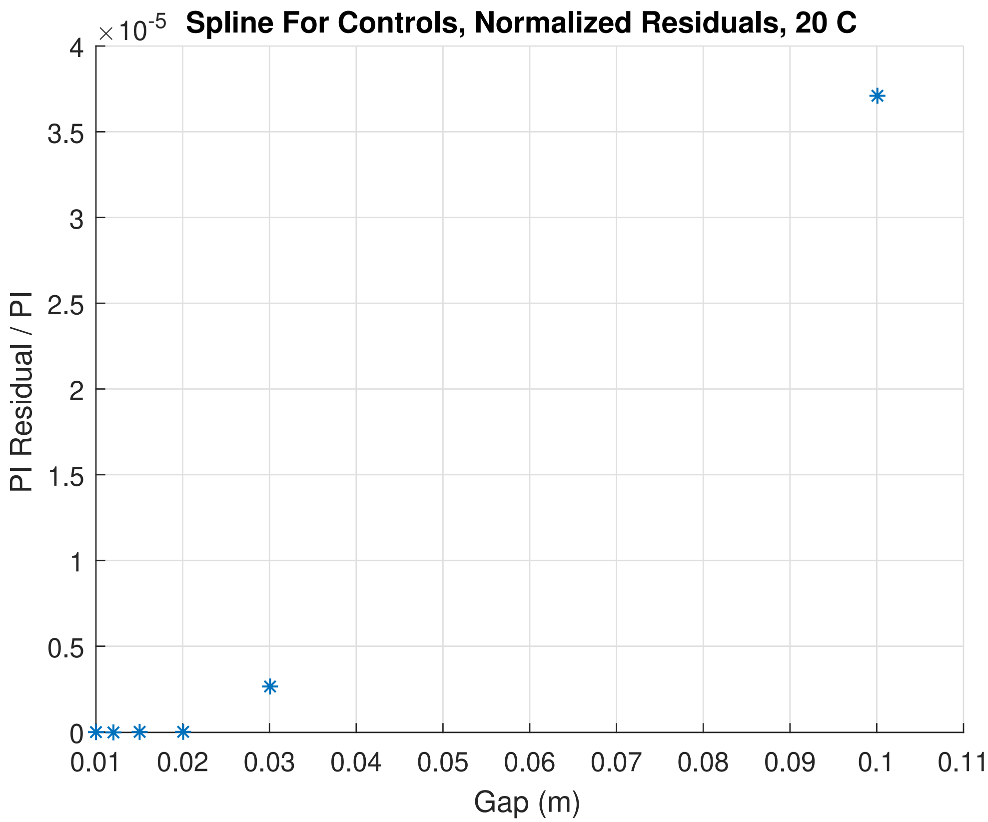

Operating Gaps, Normalized Residuals, 20 C
×10^-15
6
5
4
3
2
1
0
-1
-2
-3
-4
PI Residual / PI
0.01
0.015
0.02
0.025
0.03
0.035
Gap (m)


All Gaps, Fit PI vs Gap, 20 C
Phase Integral (T 2 mm 3)
Gap (m)
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.1
0.11
Meas
Fit
Fit:
PI = exp(p1*g4 + p2*g3 + p3*g2 + p4*g1 + p5)
[PI] = T2 m3, [g] = m
Coefficients:
p1 = 36392.131
p2 = -7041.6955
p3 = 656.7881
p4 = -104.0863
p5 = -11.3256


All Gaps, Normalized Residuals, 20 C
×10^-6
4
3
2
1
0
-1
-2
-3
-4
-5
PI Residual / PI
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.1
0.11
Gap (m)



Spline For Controls, PI vs Gap, 20 C
Meas
Fit
Phase Integral (T 2 mm 3)
Gap (m)
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.1
0.11


Spline For Controls, Normalized Residuals, 20 C
×10^-5
4
3.5
3
2.5
2
1.5
1
0.5
0
PI Residual / PI
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.1
0.11
Gap (m)