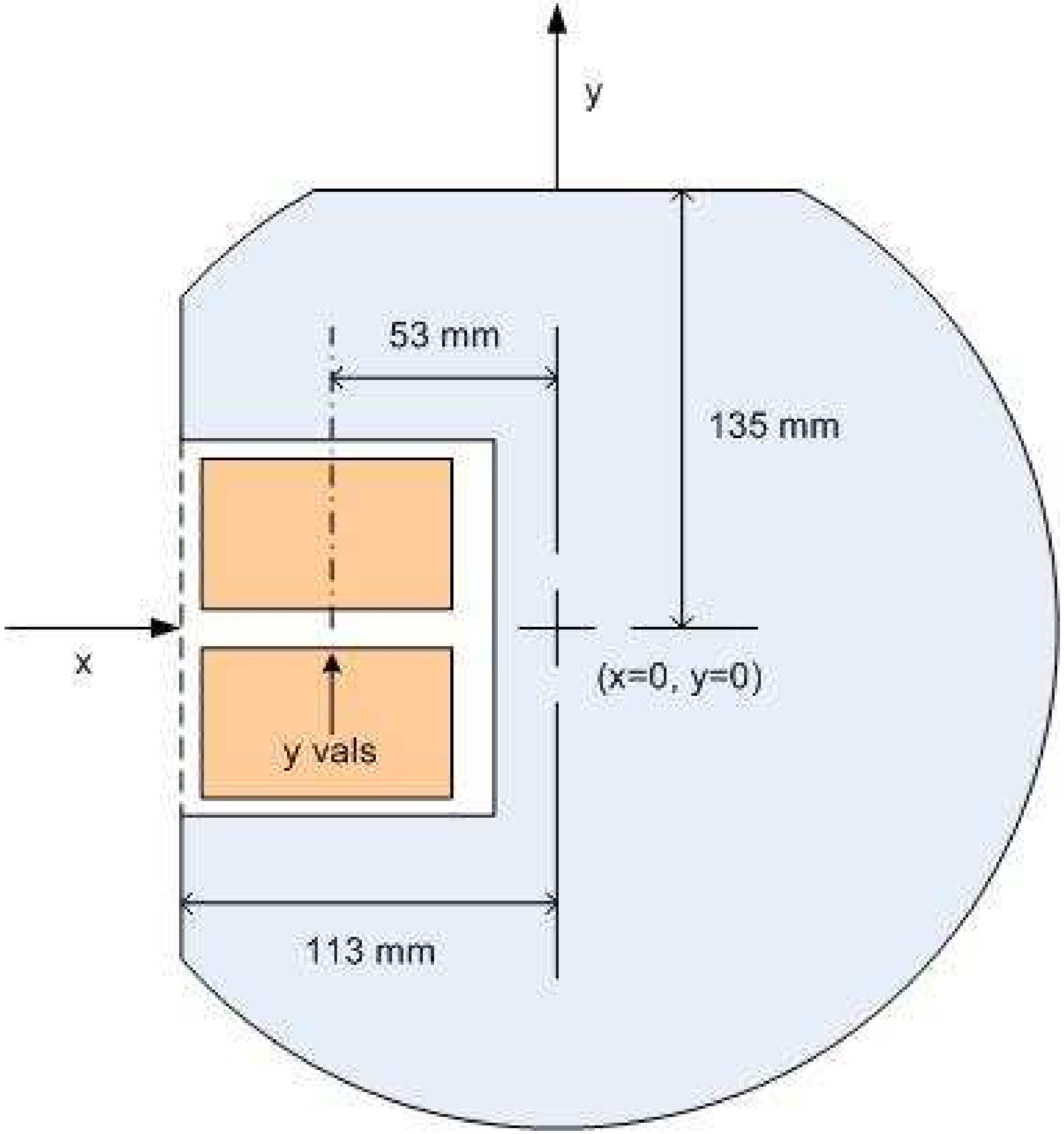
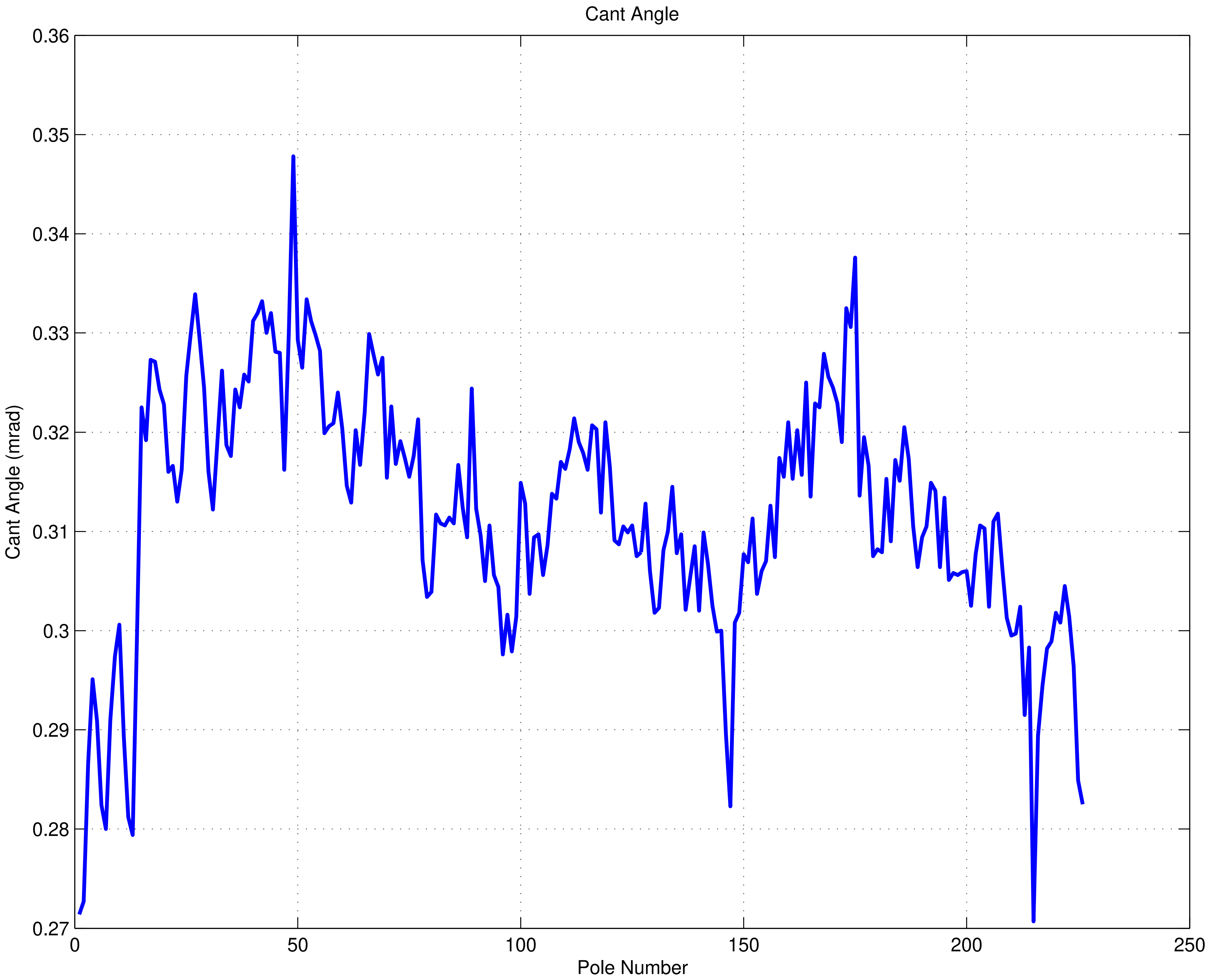
SLAC Magnetic Measurements
Mechanical Measurement Analysis

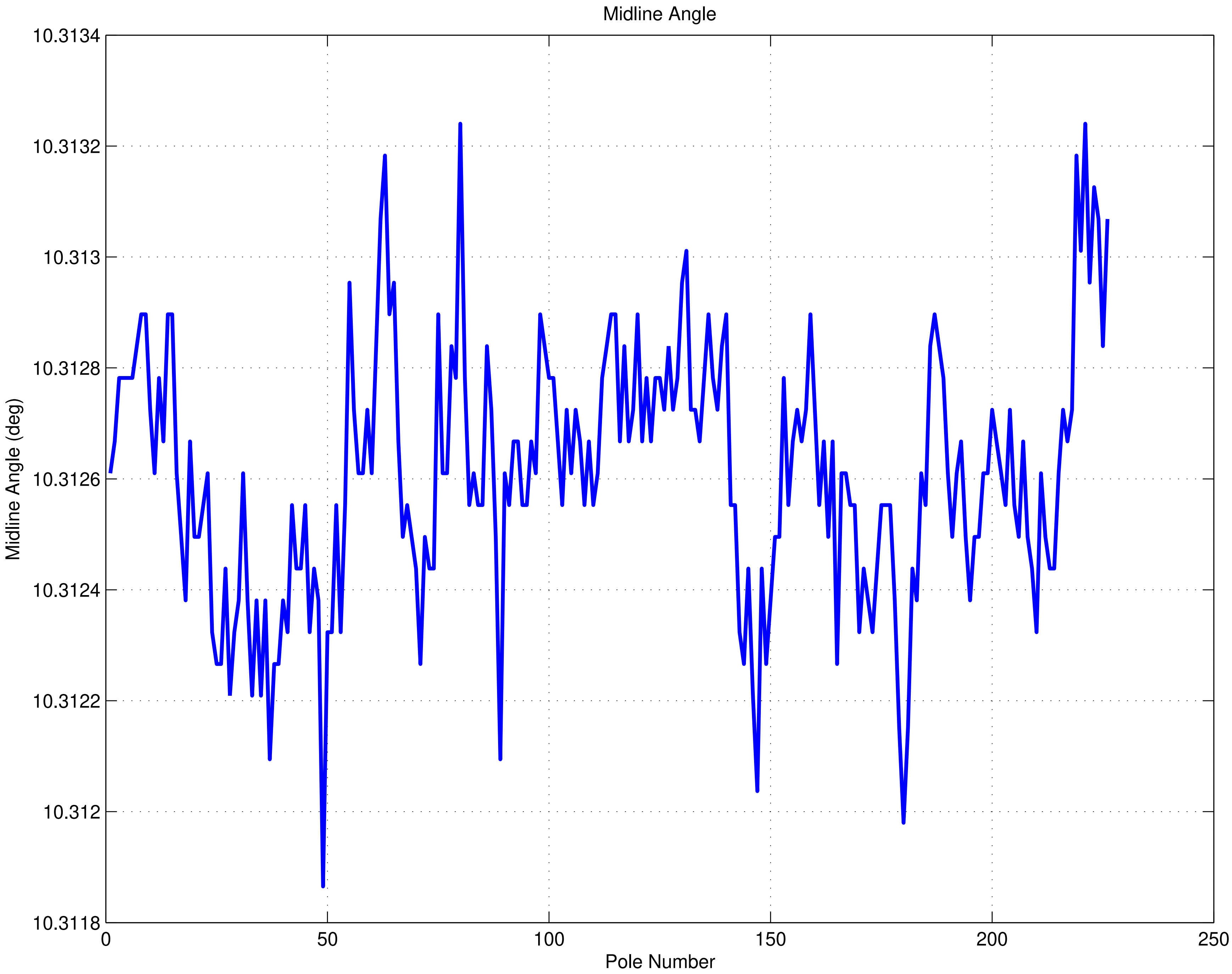
Parameters:
INPUT−FILE−DIR =S:\MagData\LCLS\Undulator\L143−112000−19\DATASET0001\MECHANICAL MEASUREMENTS\DATA\
INPUT−FILE−NAME =SN19 POLE TIP DATA POINTS − PRETUNING 30−APR−2009.TXT

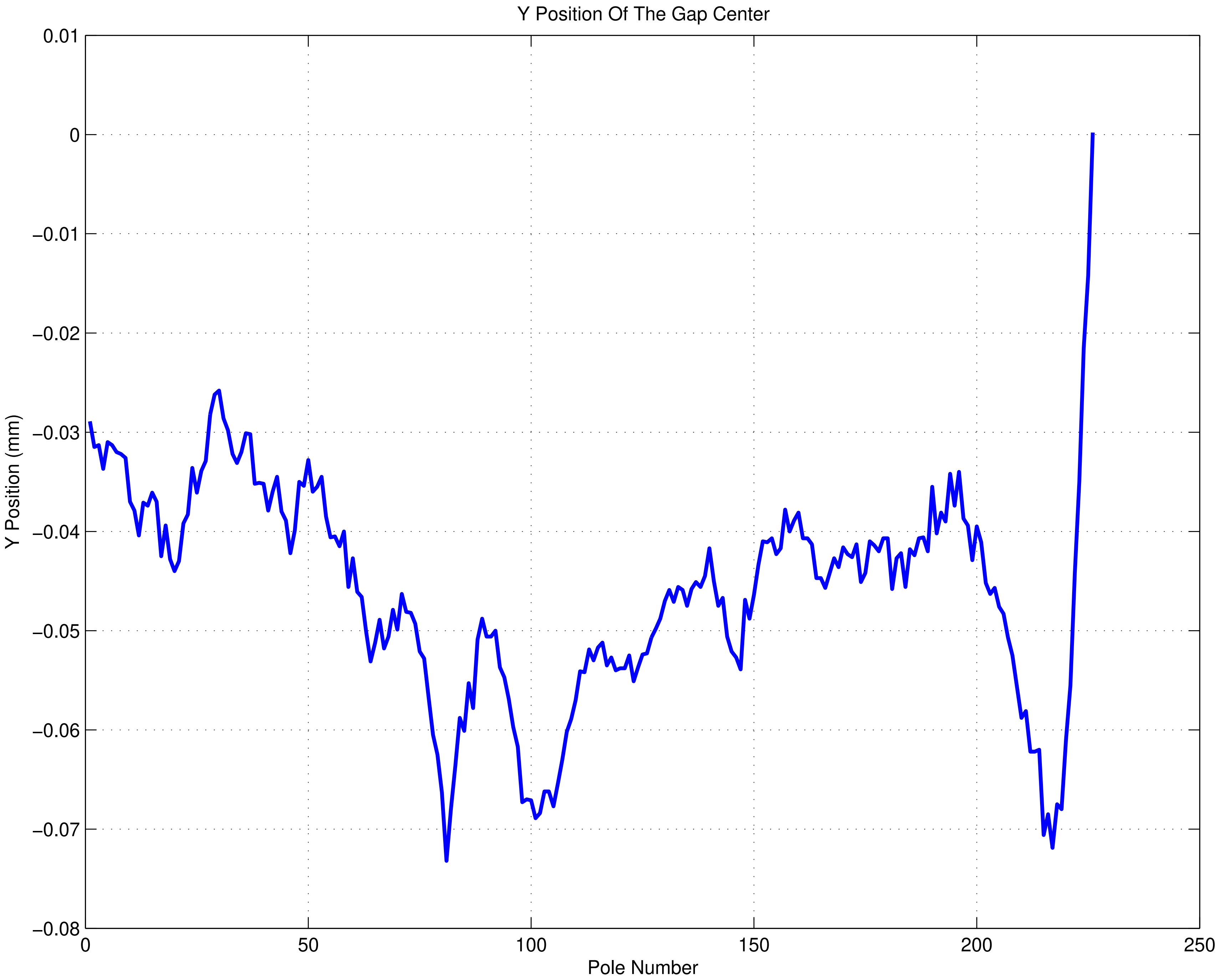


y
53 mm
135 mm
x
(x=0, y=0)
y vals
113 mm

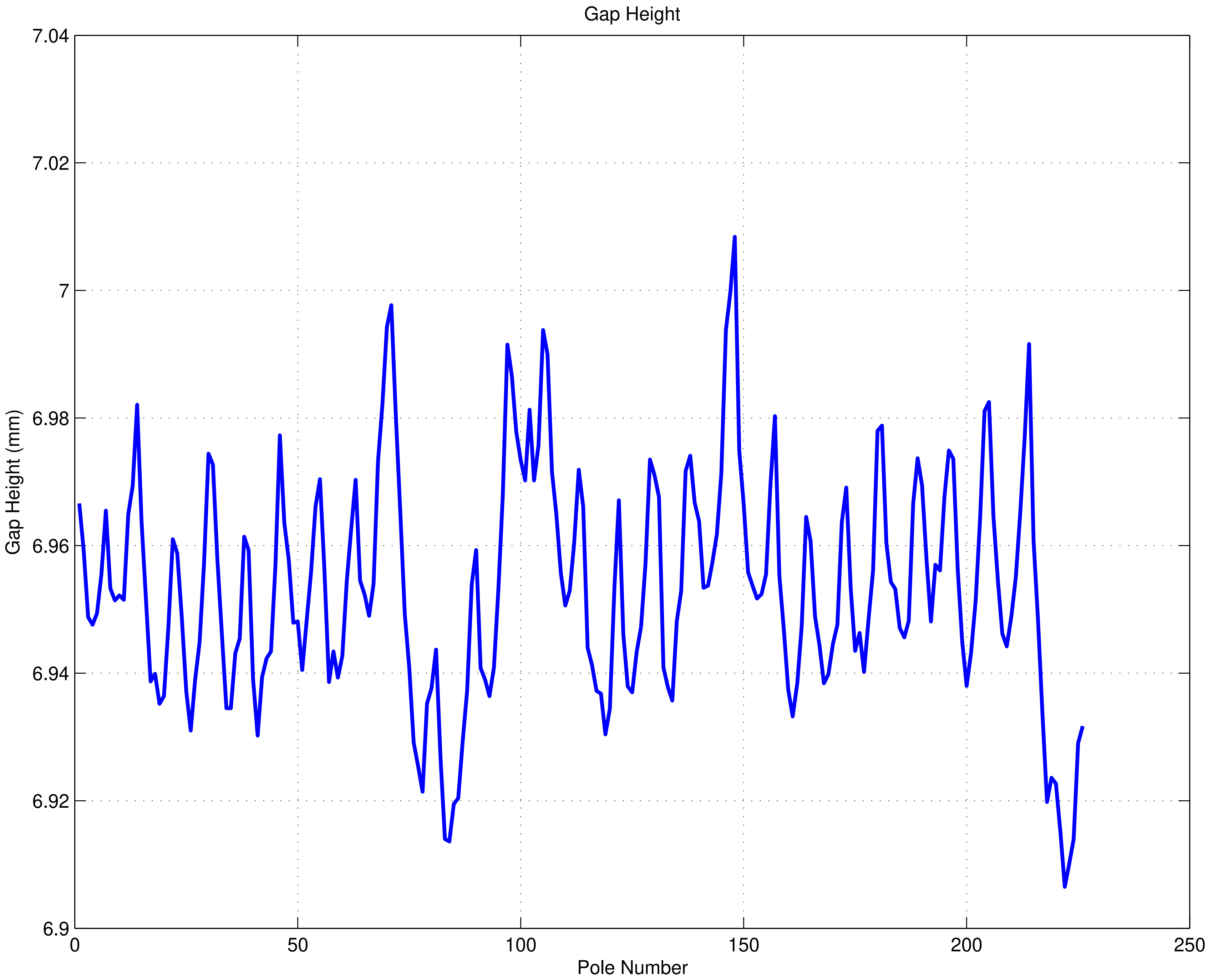


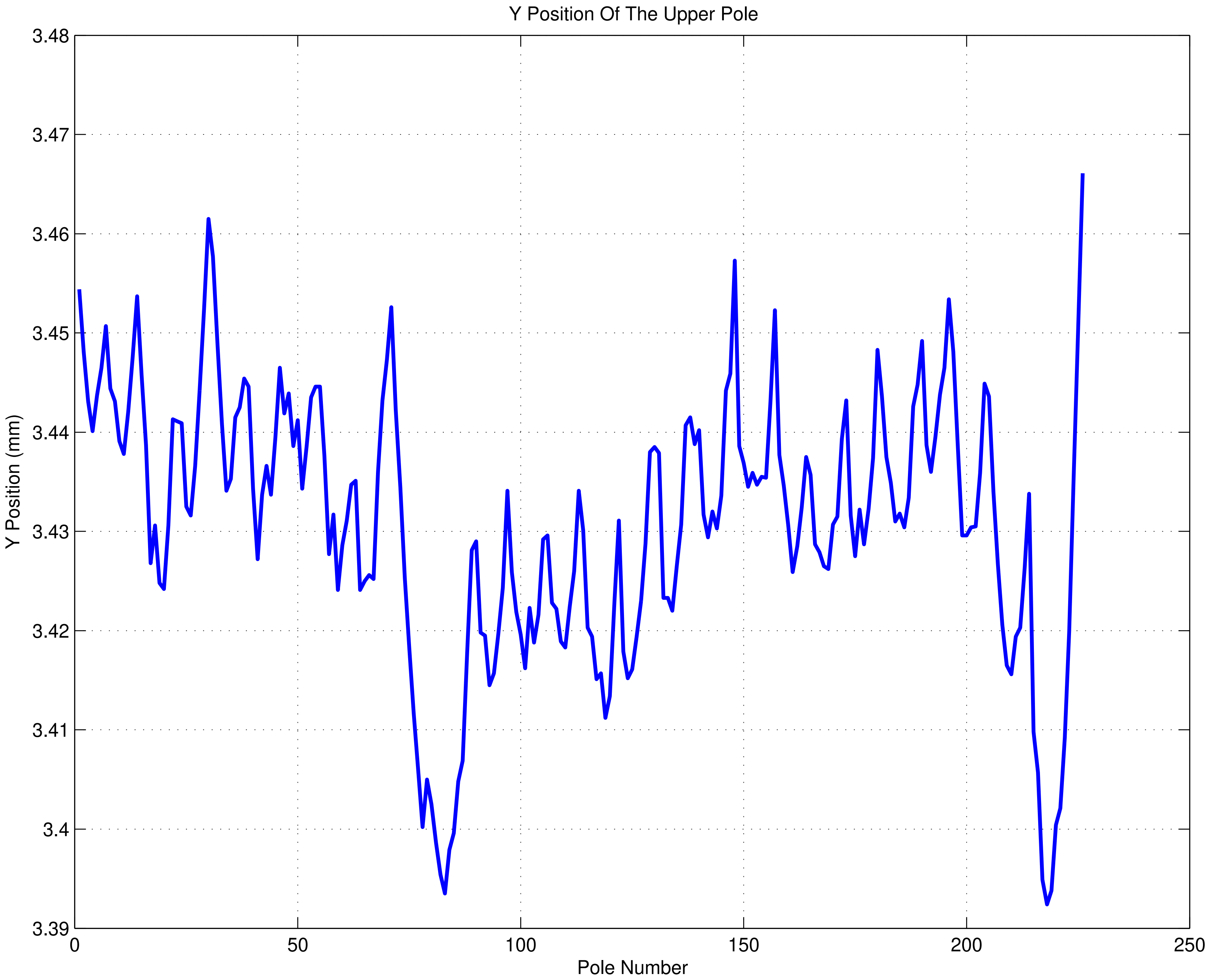
Cant Angle
0.36
0.35
0.34
0.33
0.32
0.31
0.3
0.29
0.28
0.27
Cant Angle (mrad)
0
50
100
150
200
250
Pole Number


Midline Angle
Midline Angle (deg)
Pole Number
10.3134
10.3132
10.313
10.3128
10.3126
10.3124
10.3122
10.312
10.3118
0
50
100
150
200
250

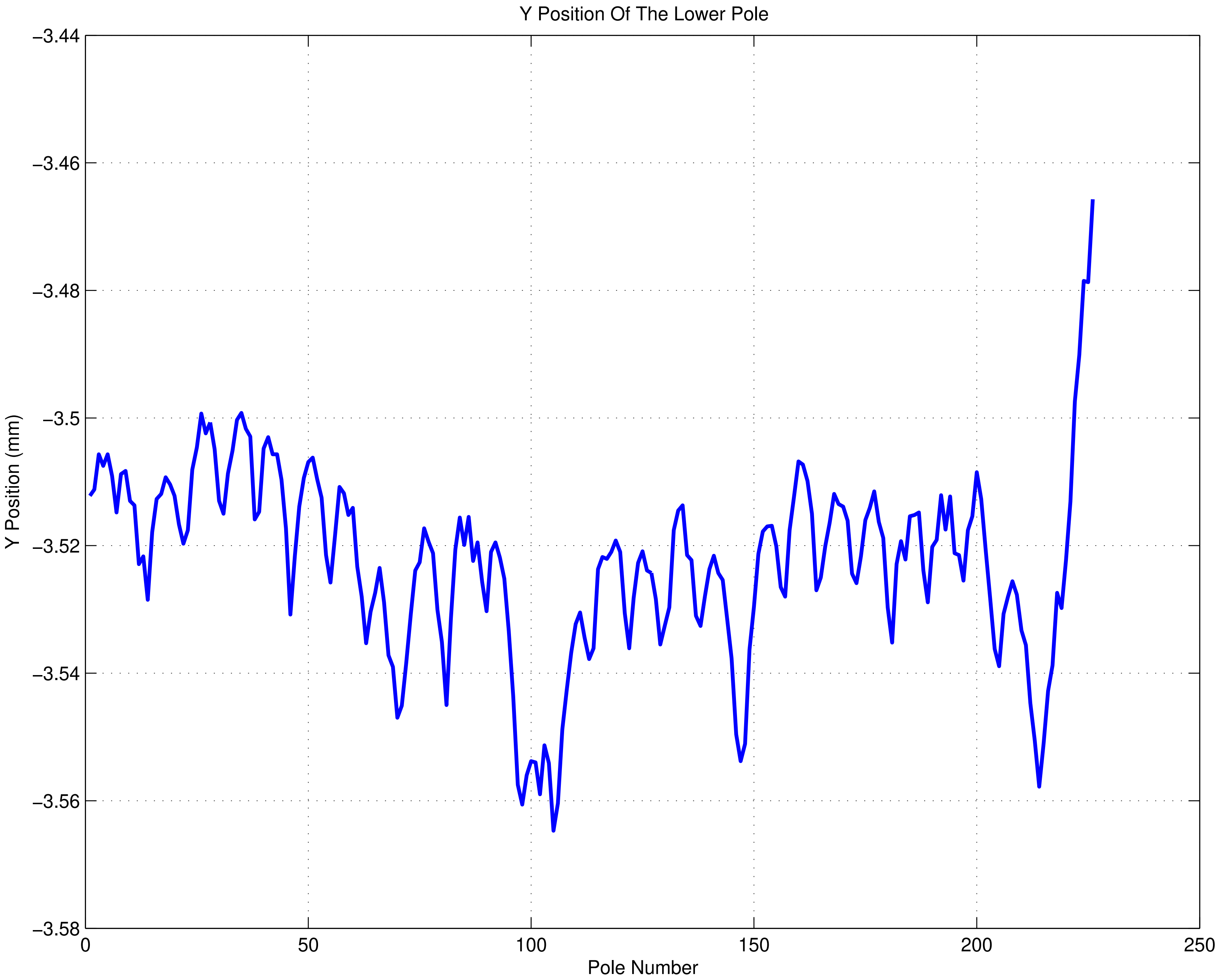


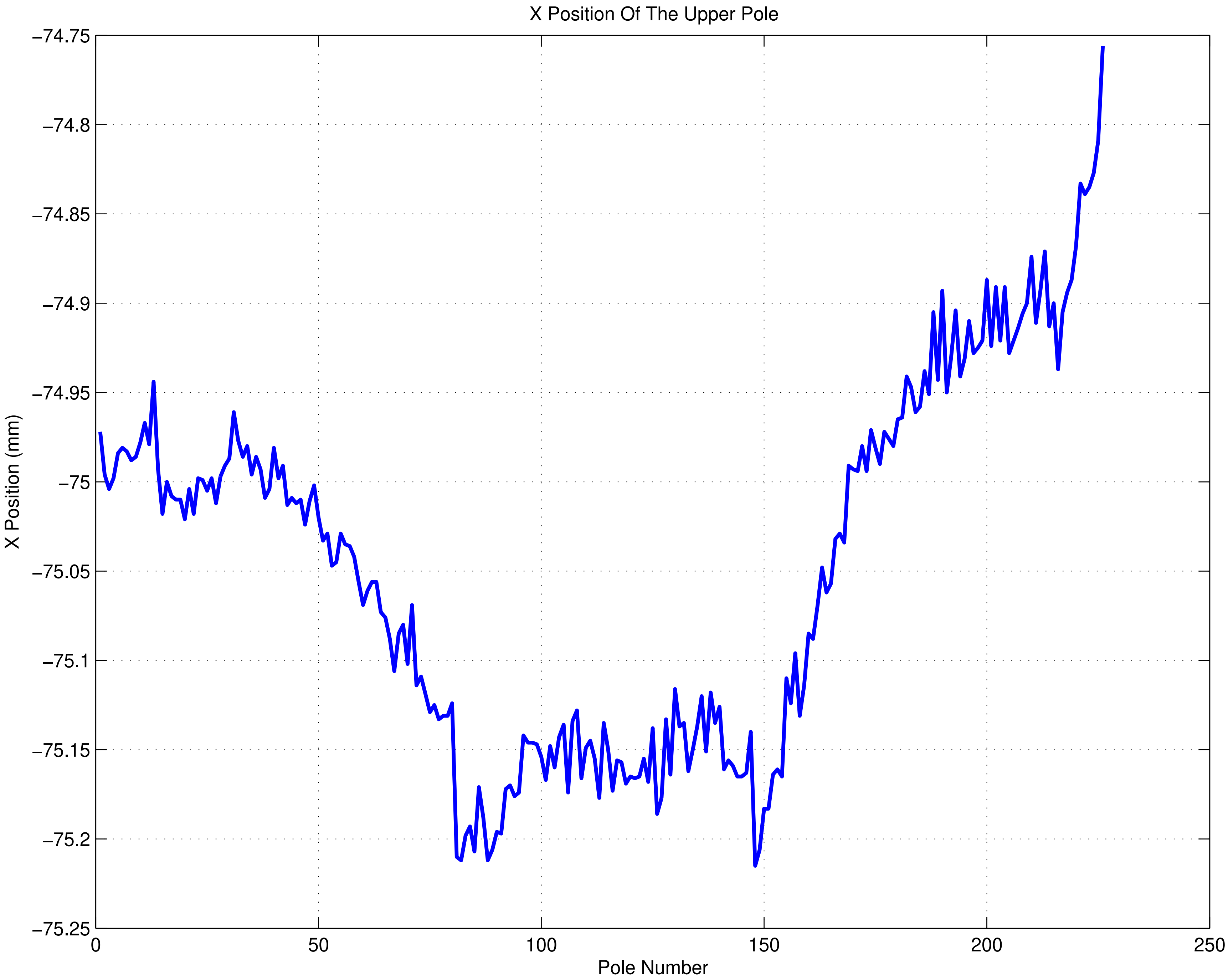
Y Position Of The Gap Center
0.01
0
–0.01
–0.02
–0.03
–0.04
–0.05
–0.06
–0.07
–0.08
Y Position (mm)
0
50
100
150
200
250
Pole Number

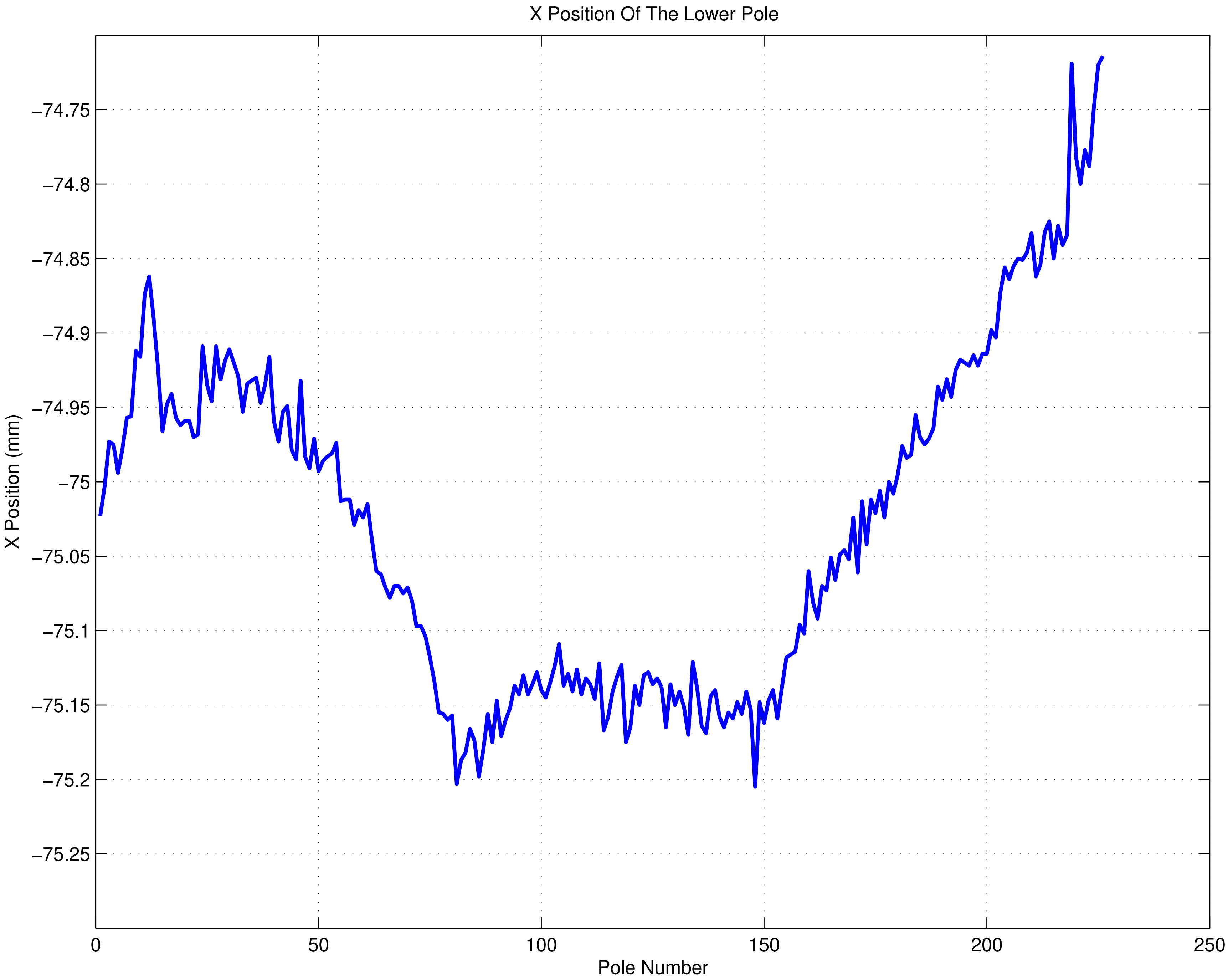

Gap Height
Gap Height (mm)
Pole Number
7.04
7.02
7
6.98
6.96
6.94
6.92
6.9
0
50
100
150
200
250



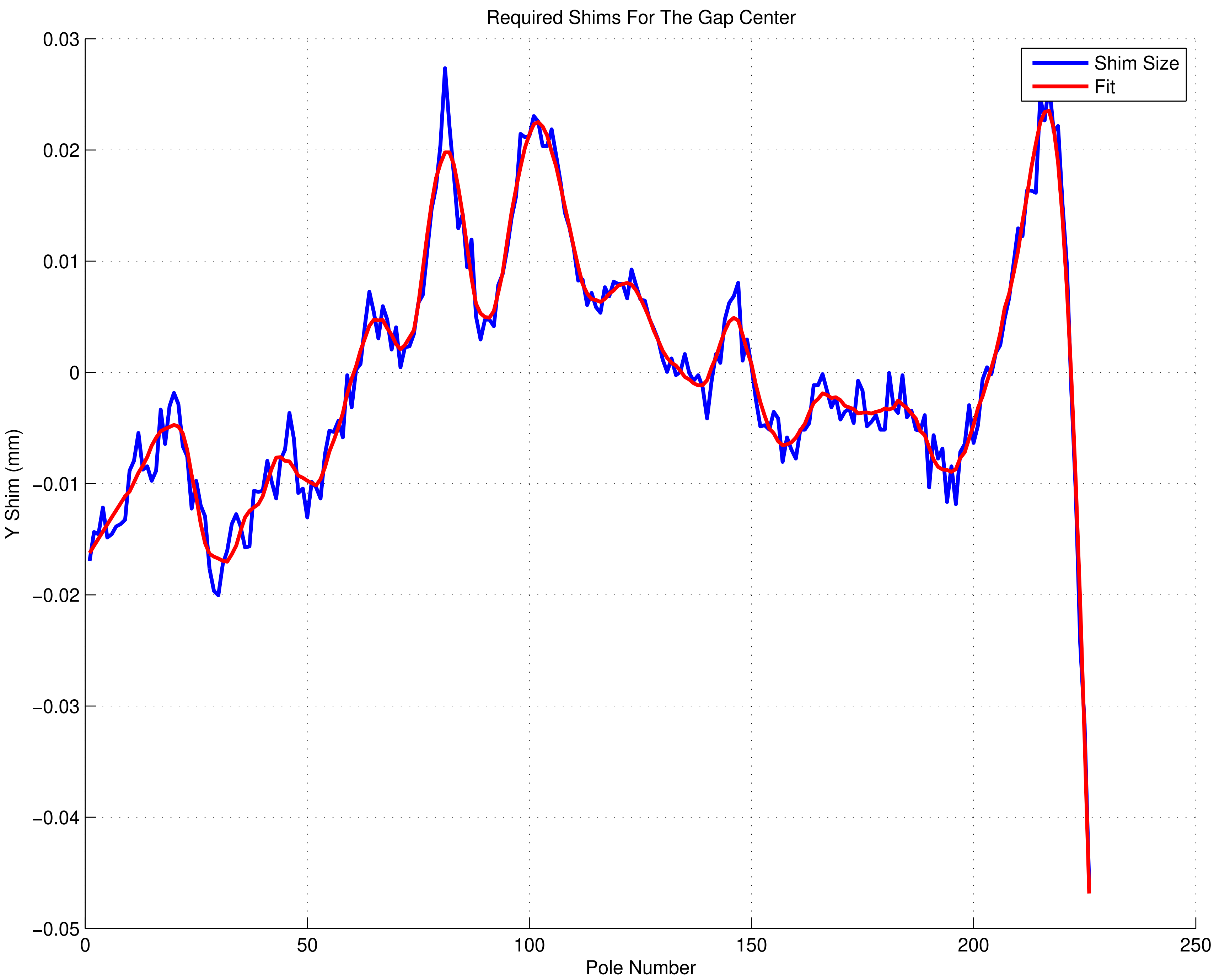
Y Position Of The Upper Pole
Y Position (mm)
Pole Number
3.48
3.47
3.46
3.45
3.44
3.43
3.42
3.41
3.4
3.39
0
50
100
150
200
250


Y Position Of The Lower Pole
Y Position (mm)
Pole Number
−3.44
−3.46
−3.48
−3.5
−3.52
−3.54
−3.56
−3.58
0
50
100
150
200
250


X Position Of The Upper Pole
X Position (mm)
Pole Number
−74.75
−74.8
−74.85
−74.9
−74.95
−75
−75.05
−75.1
−75.15
−75.2
−75.25
0
50
100
150
200
250



X Position Of The Lower Pole
X Position (mm)
−74.75
−74.8
−74.85
−74.9
−74.95
−75
−75.05
−75.1
−75.15
−75.2
−75.25
0
50
100
150
200
250
Pole Number


Required Shims For The Gap Center
Shim Size
Fit
Y Shim (mm)
Pole Number
0.03
0.02
0.01
0
−0.01
−0.02
−0.03
−0.04
−0.05
0
50
100
150
200
250