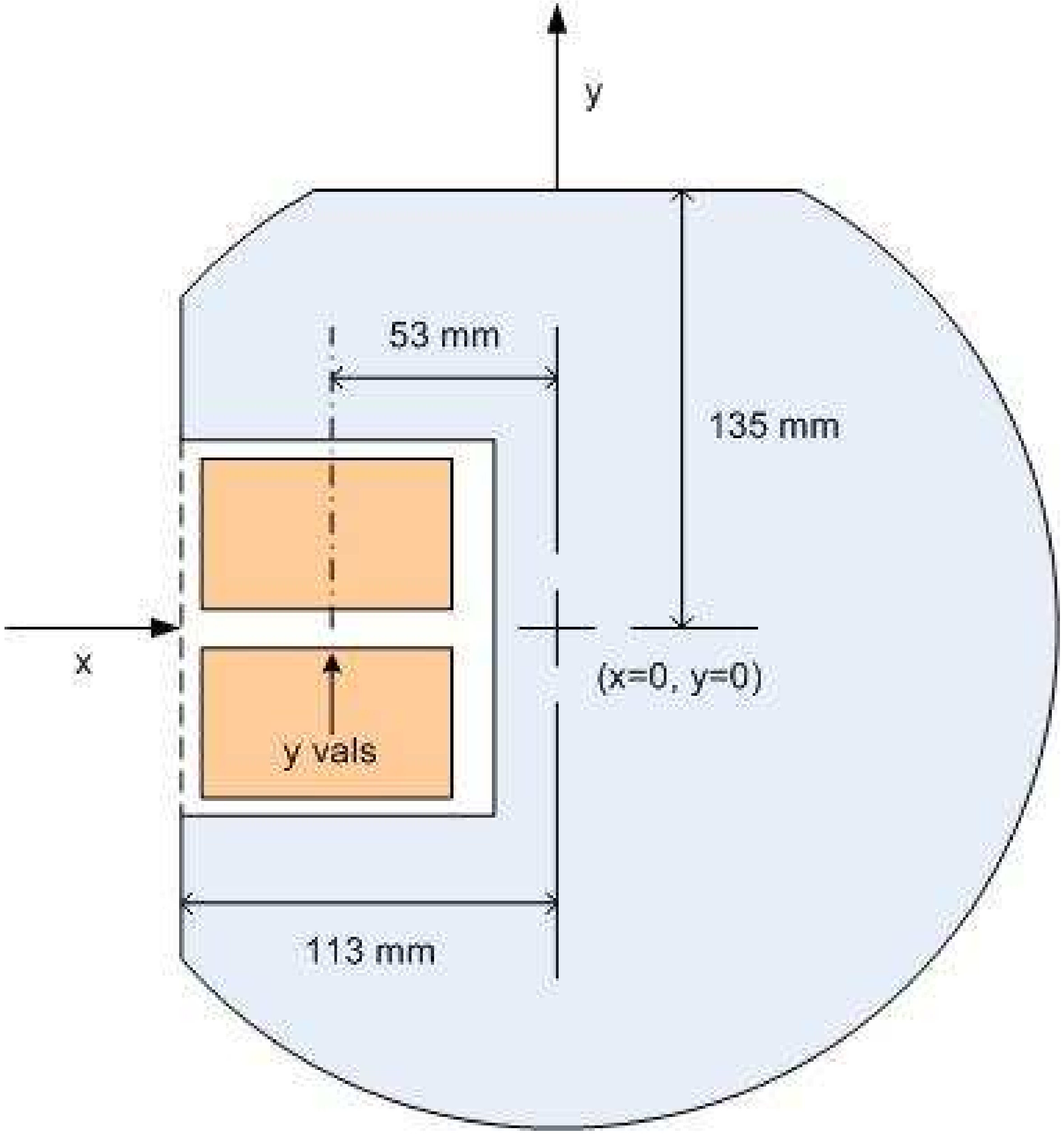
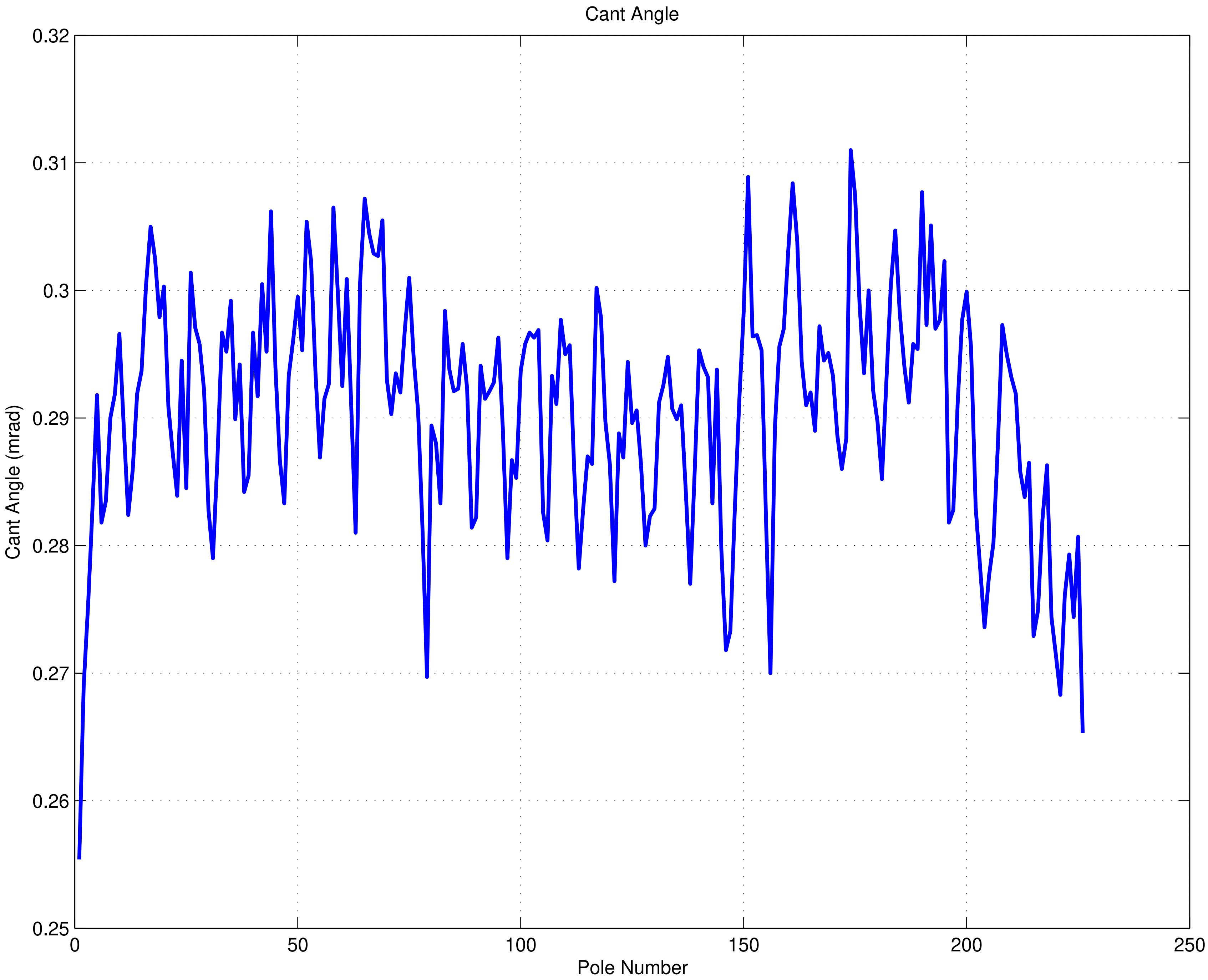
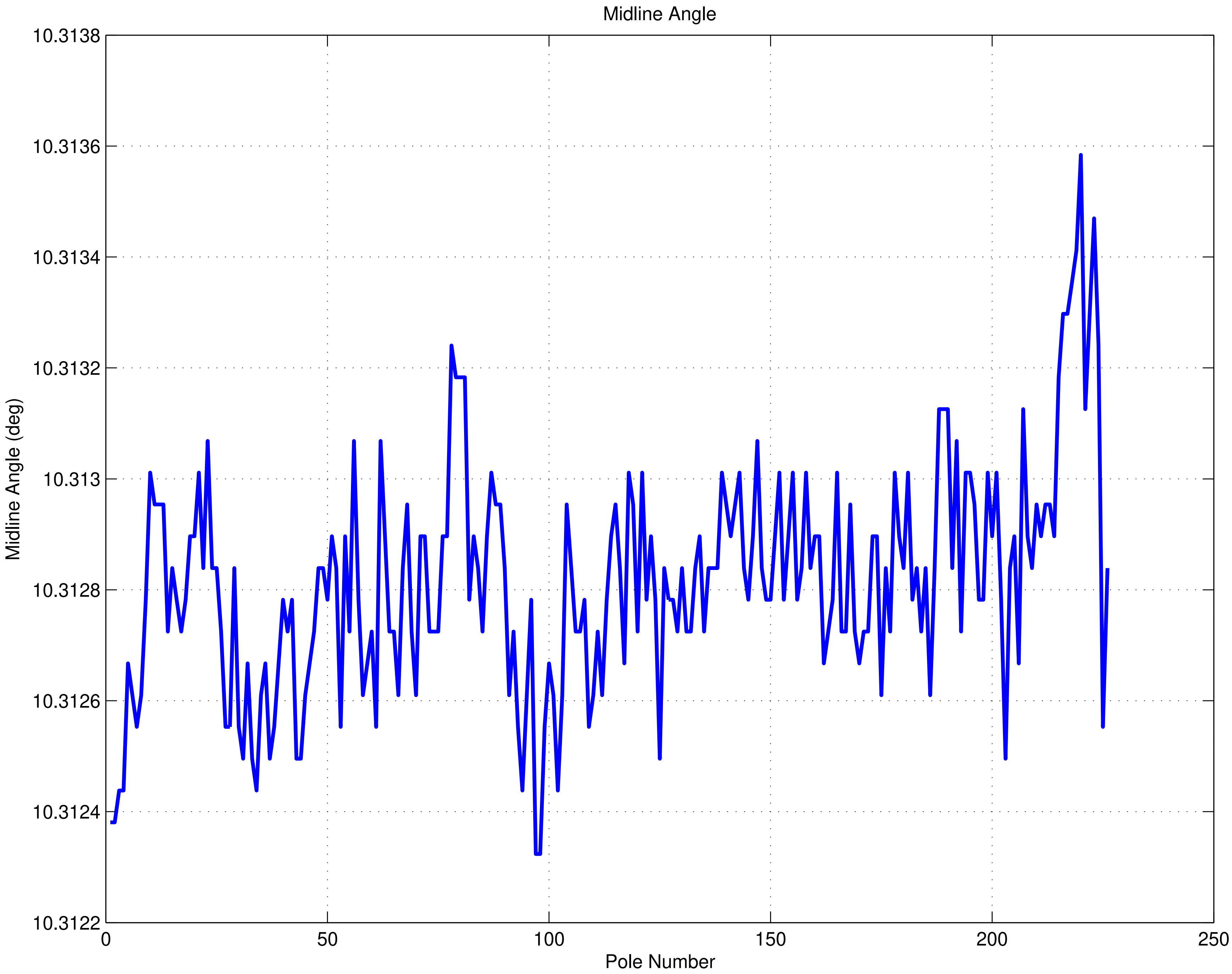
SLAC Magnetic Measurements
Mechanical Measurement Analysis

Parameters:
INPUT−FILE−DIR =S:\MagData\LCLS\Undulator\L143−112000−5 shim check\DATASET0001\MECHANICAL MEASUREMENTS
INPUT−FILE−NAME =SN5 shim check POLE TIP DATA POINTS − PRETUNING 17−DEC−2008.TXT

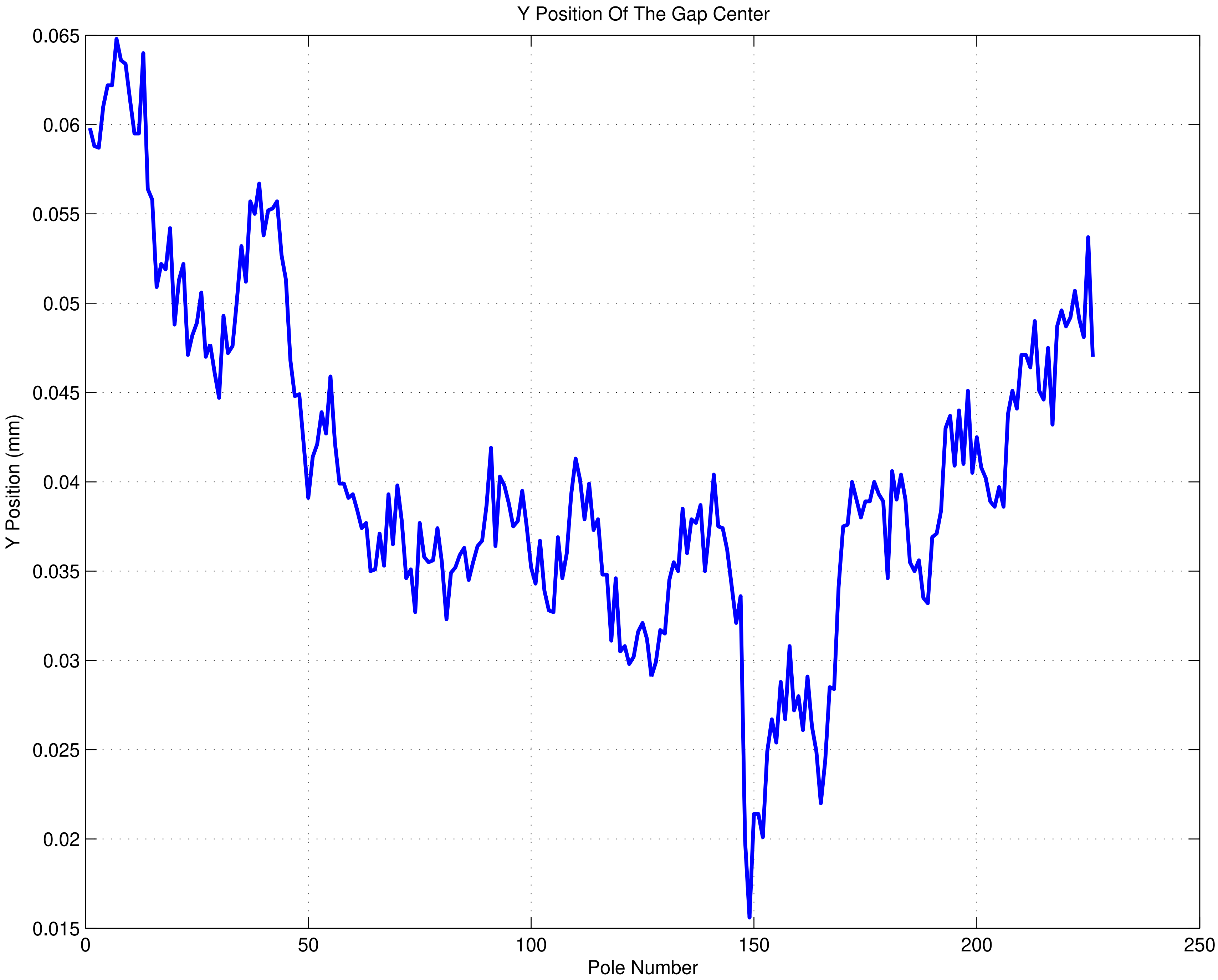

y
53 mm
135 mm
x
(x=0, y=0)
y vals
113 mm



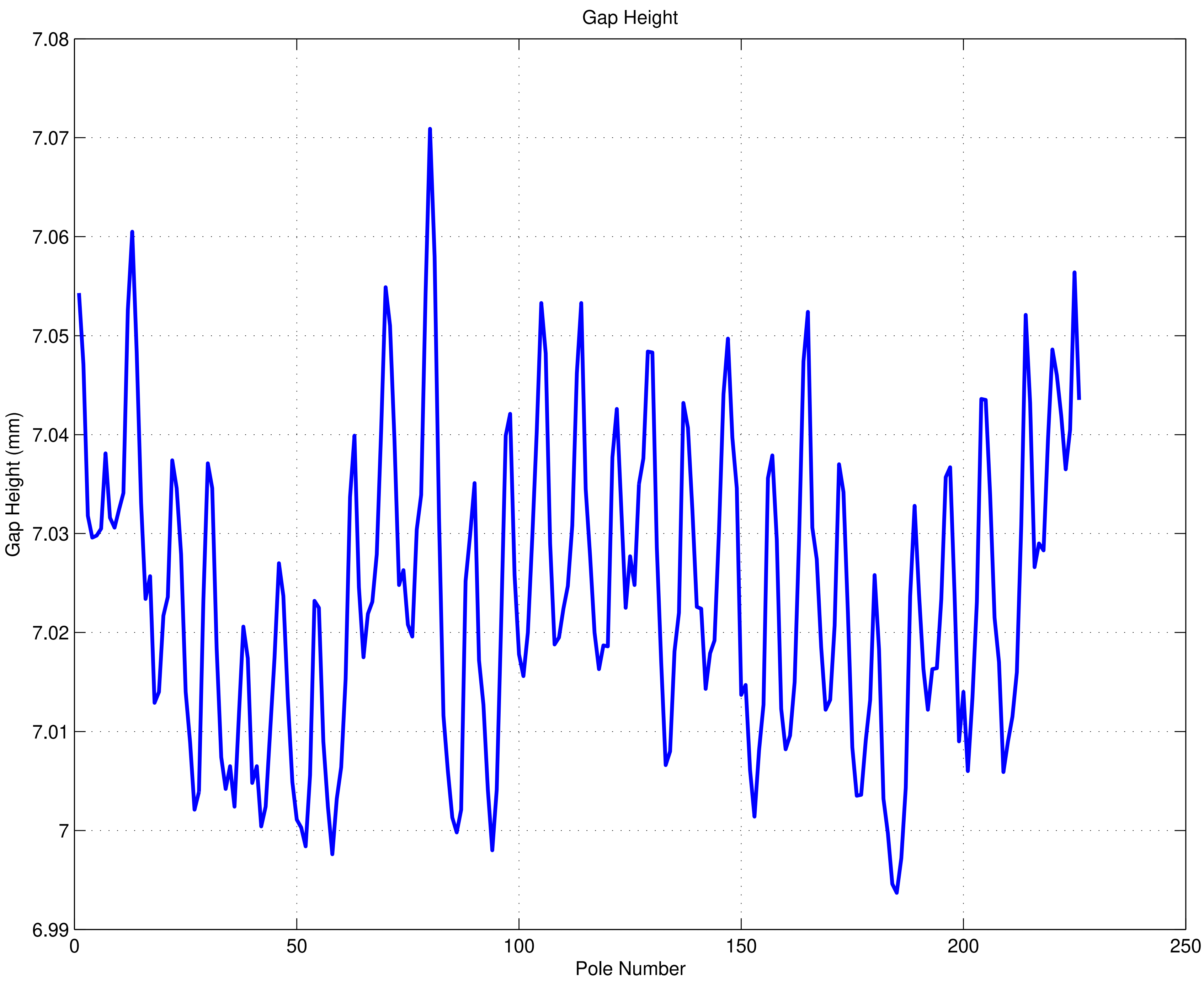
Cant Angle
Cant Angle (mrad)
Pole Number
0.32
0.31
0.3
0.29
0.28
0.27
0.26
0.25
0
50
100
150
200
250

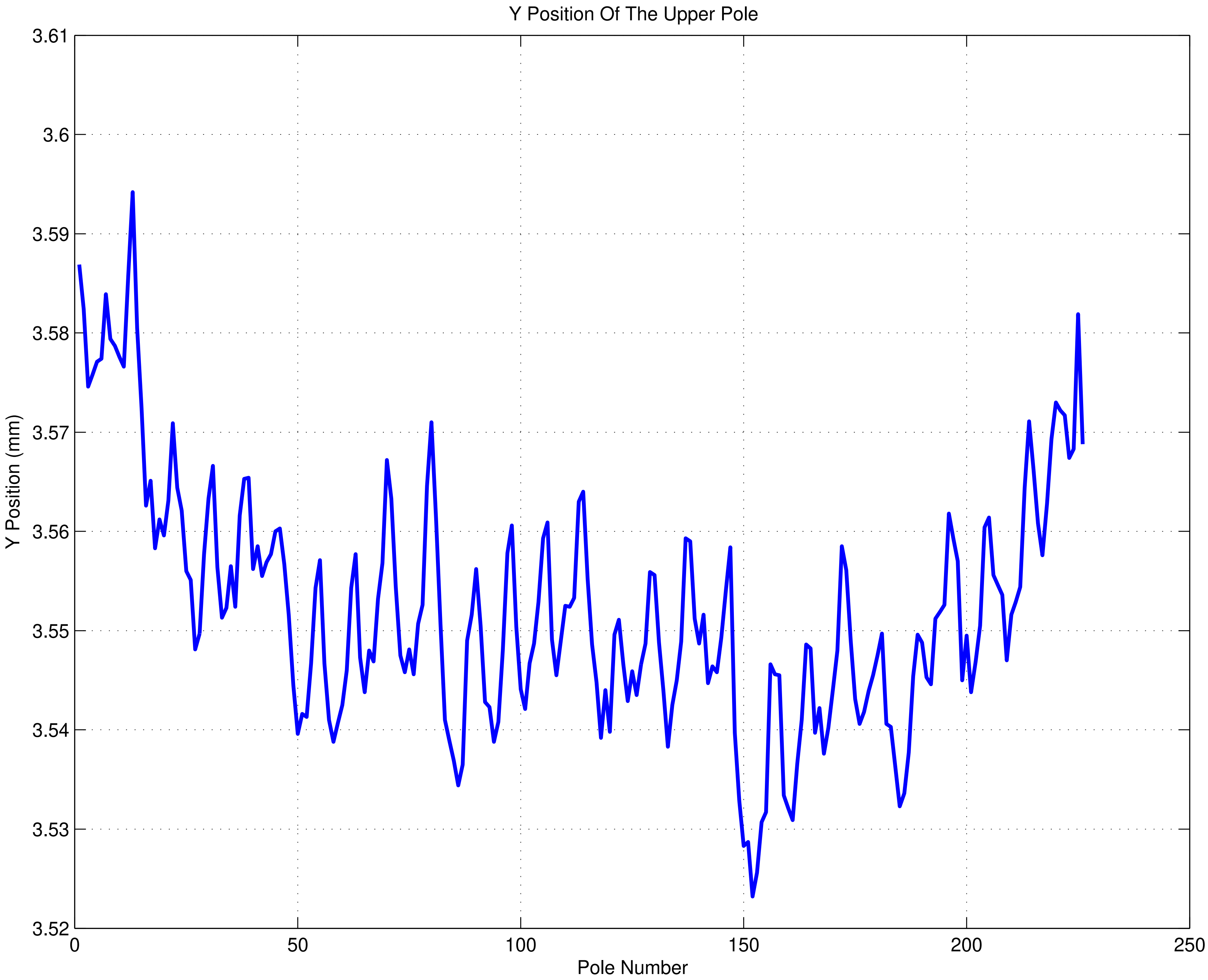


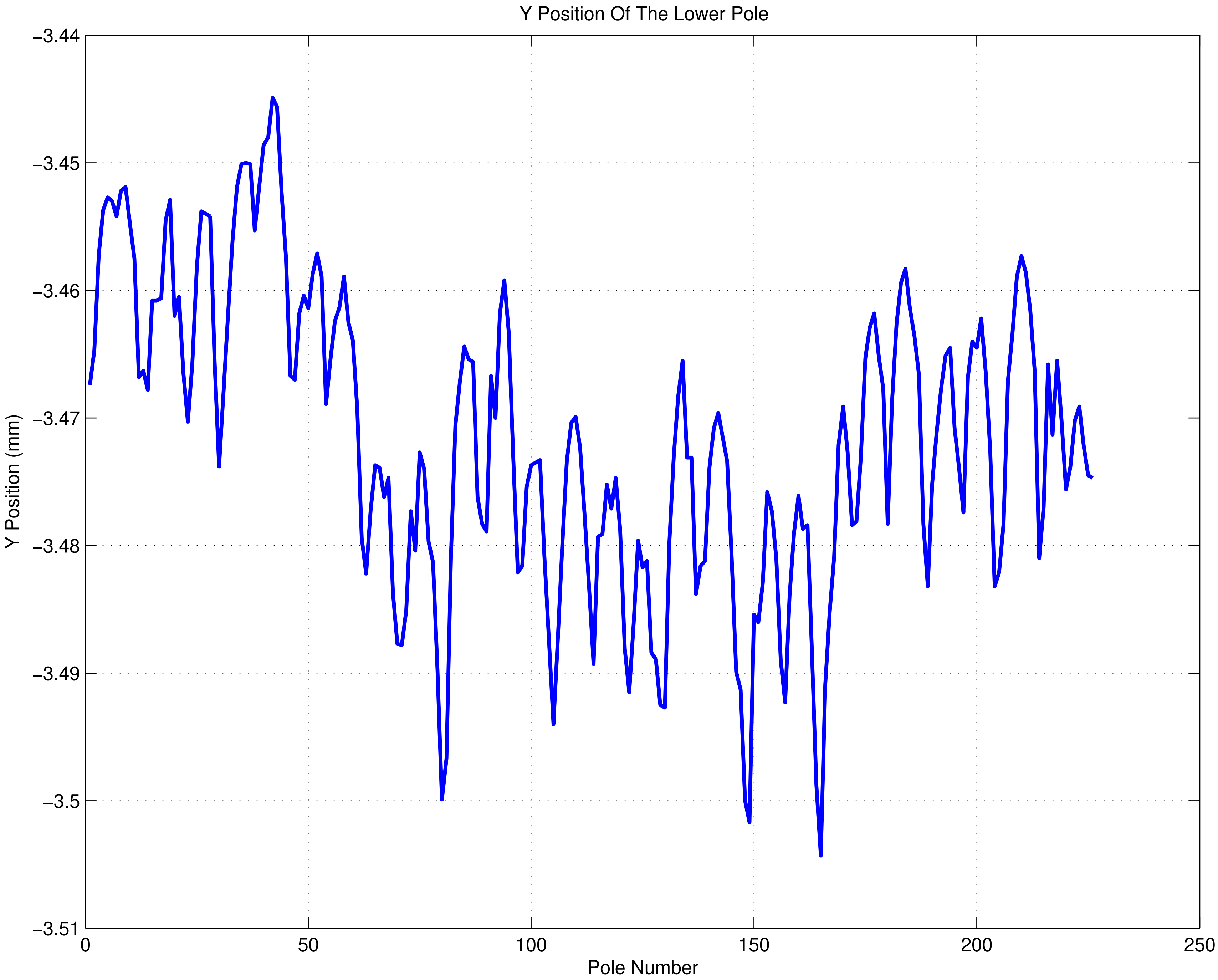
Midline Angle
Midline Angle (deg)
Pole Number
10.3138
10.3136
10.3134
10.3132
10.313
10.3128
10.3126
10.3124
10.3122
0
50
100
150
200
250

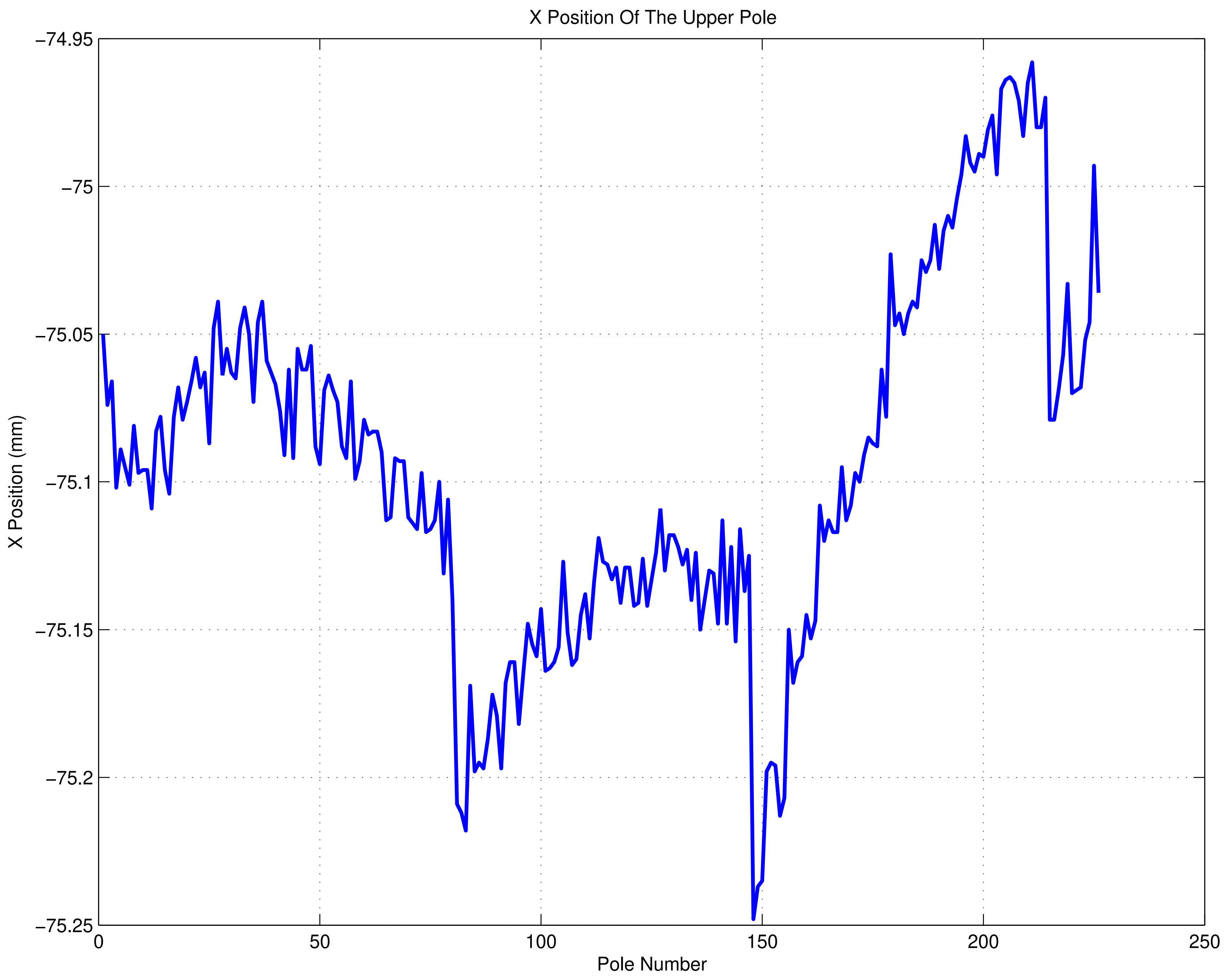


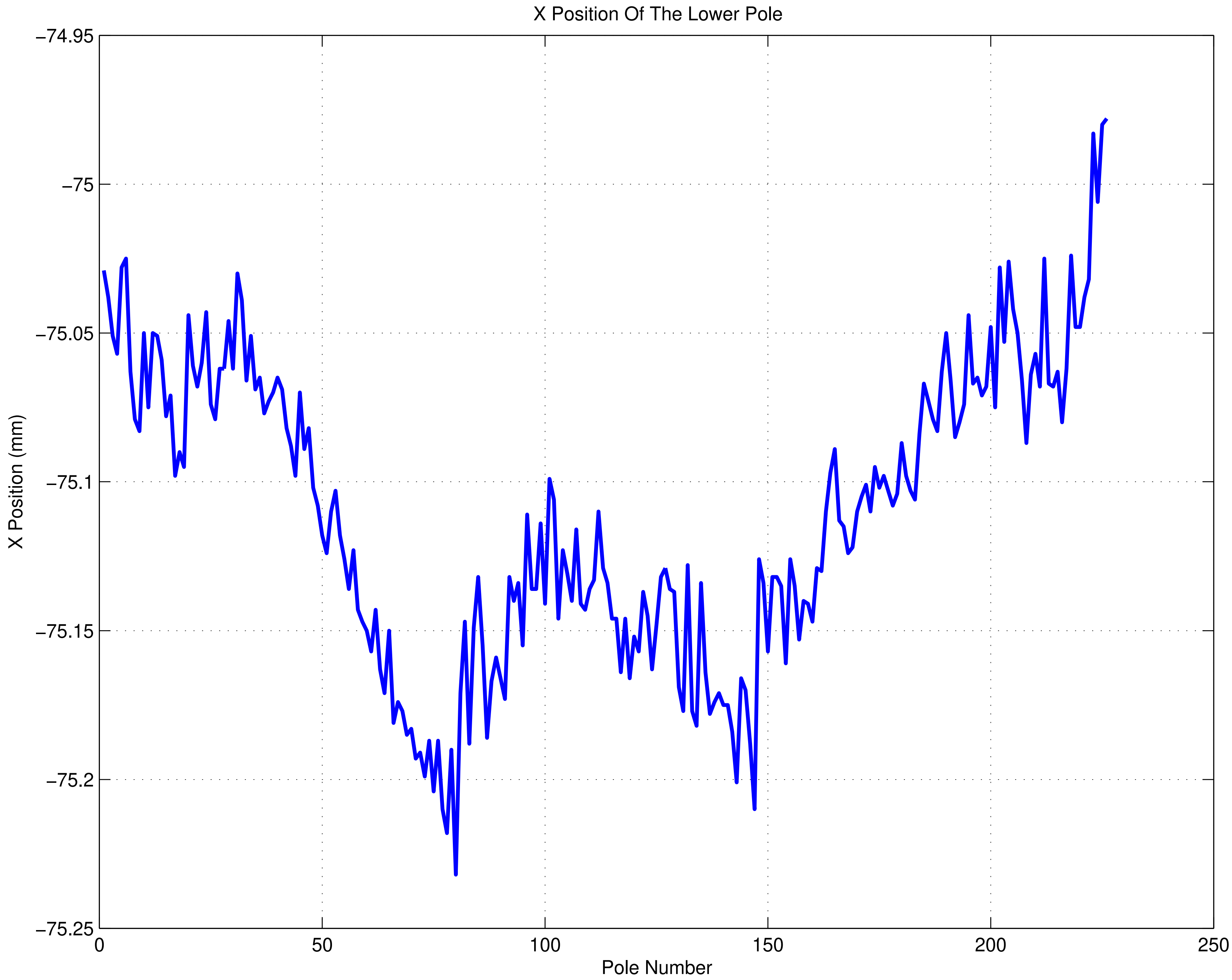
Y Position Of The Gap Center
Y Position (mm)
0.065
0.06
0.055
0.05
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0
50
100
150
200
250
Pole Number

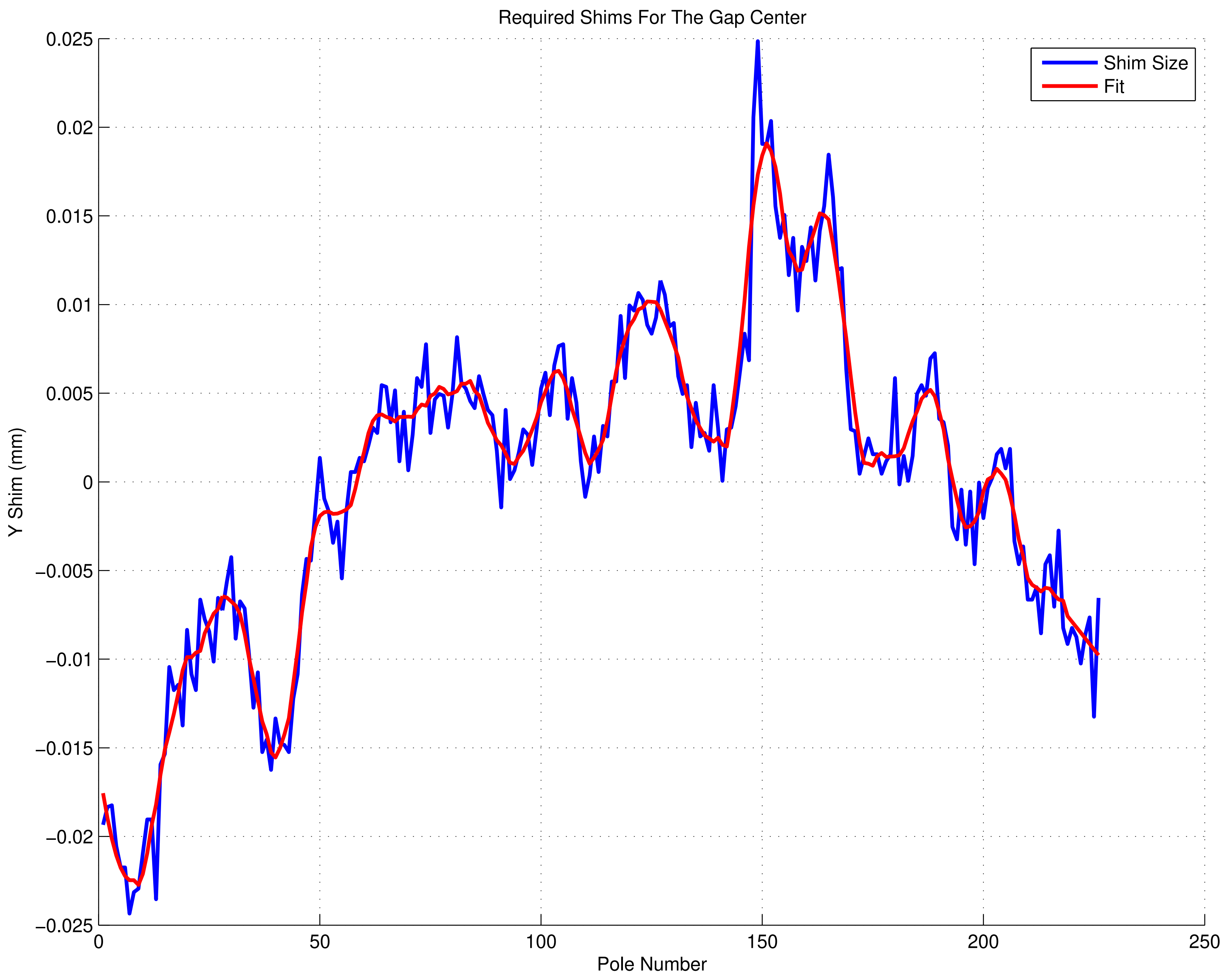

Gap Height
7.08
7.07
7.06
7.05
7.04
7.03
7.02
7.01
7
6.99
Gap Height (mm)
0
50
100
150
200
250
Pole Number


Y Position Of The Upper Pole
Y Position (mm)
Pole Number
3.61
3.6
3.59
3.58
3.57
3.56
3.55
3.54
3.53
3.52
0
50
100
150
200
250


Y Position Of The Lower Pole
Y Position (mm)
−3.44
−3.45
−3.46
−3.47
−3.48
−3.49
−3.5
−3.51
0
50
100
150
200
250
Pole Number


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



Required Shims For The Gap Center
Shim Size
Fit
Y Shim (mm)
Pole Number
0.025
0.02
0.015
0.01
0.005
0
−0.005
−0.01
−0.015
−0.02
−0.025
0
50
100
150
200
250