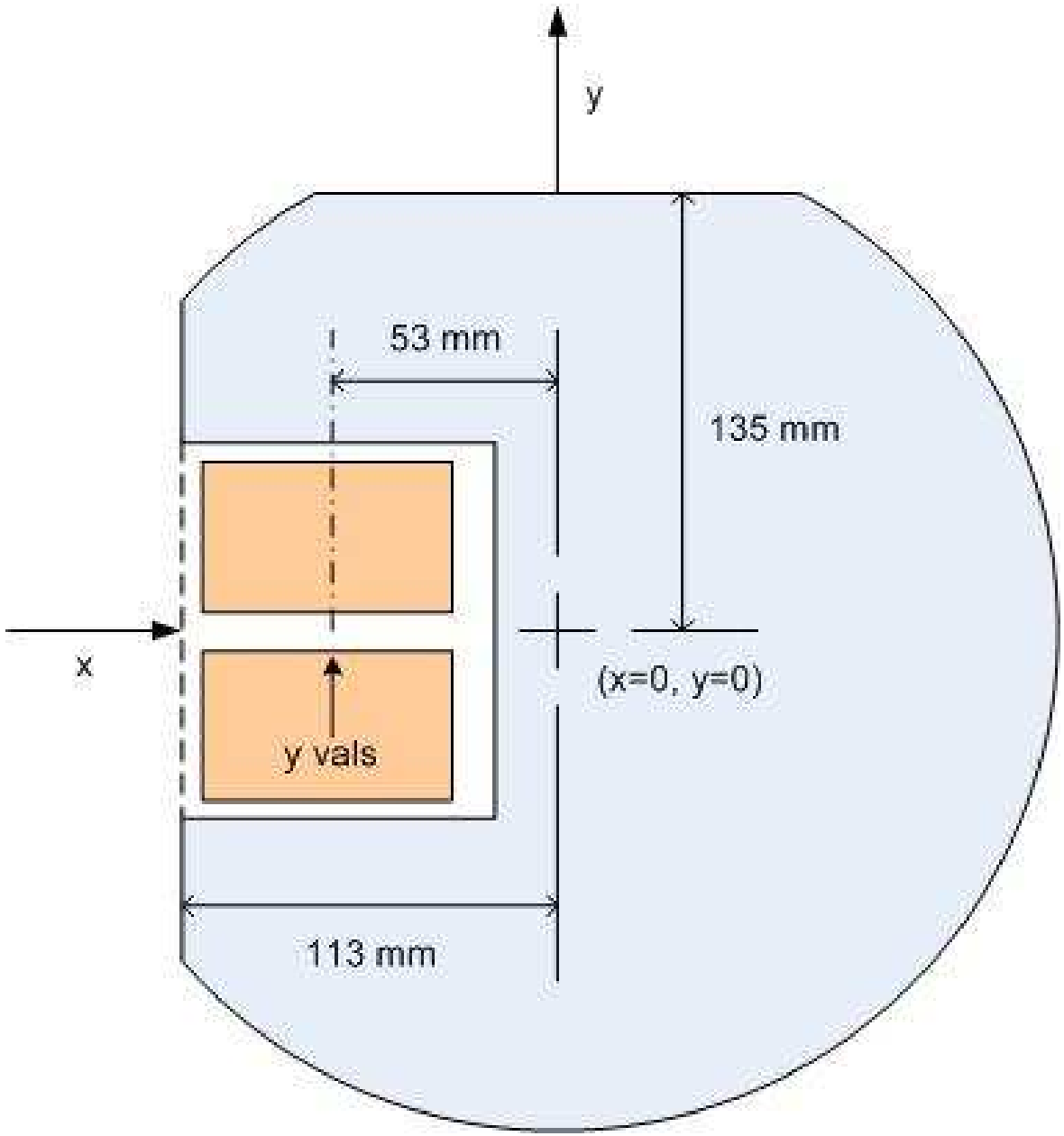
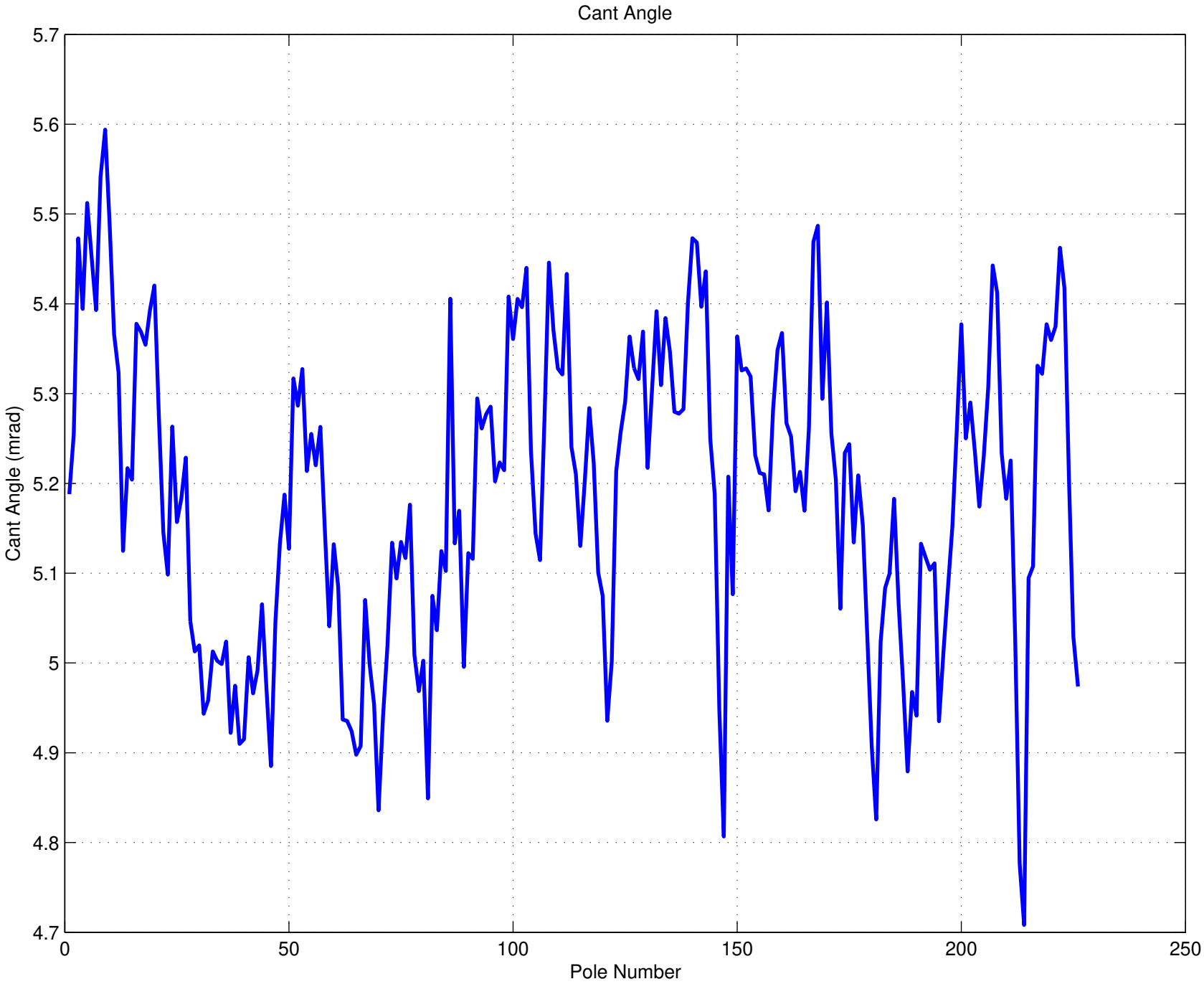
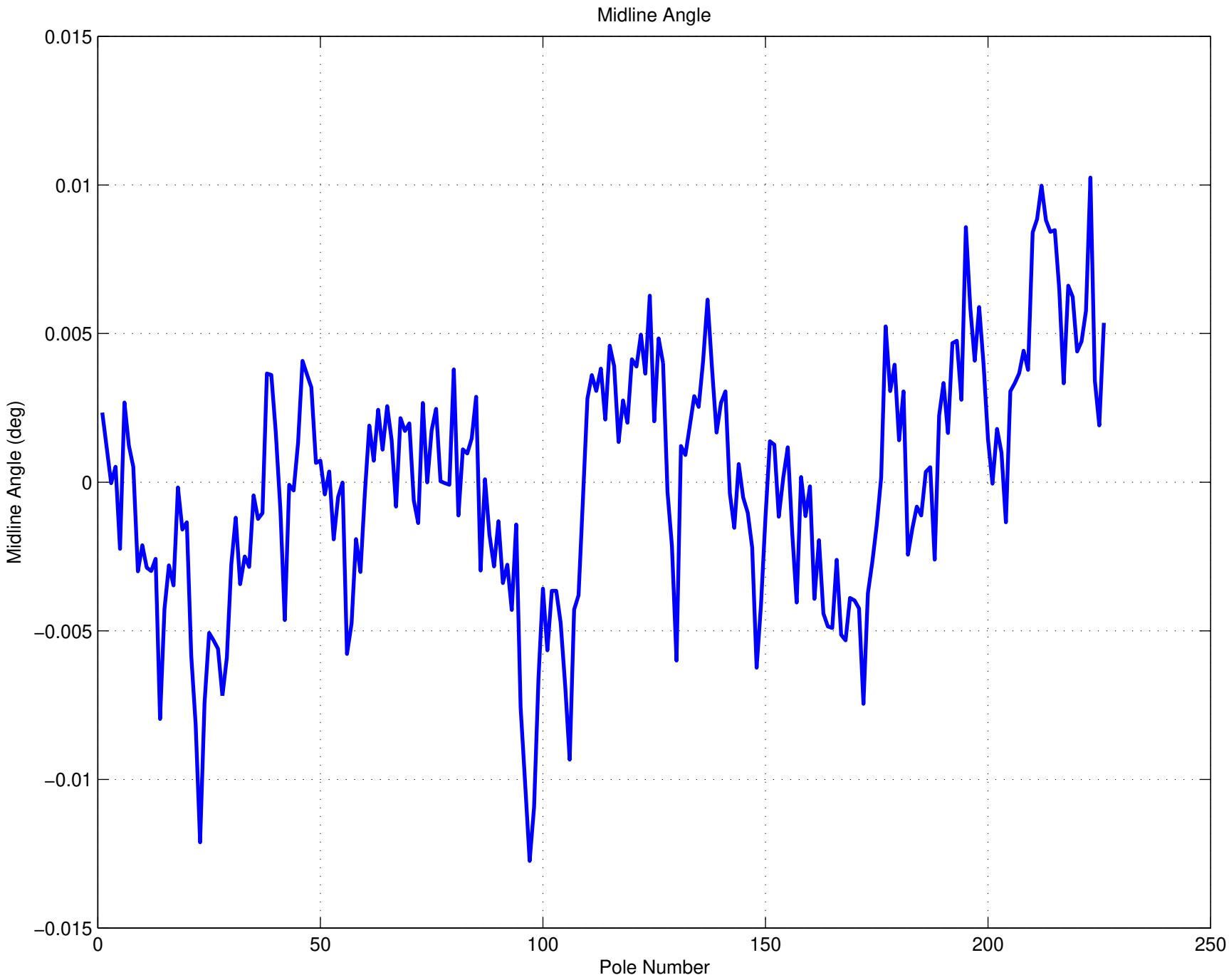
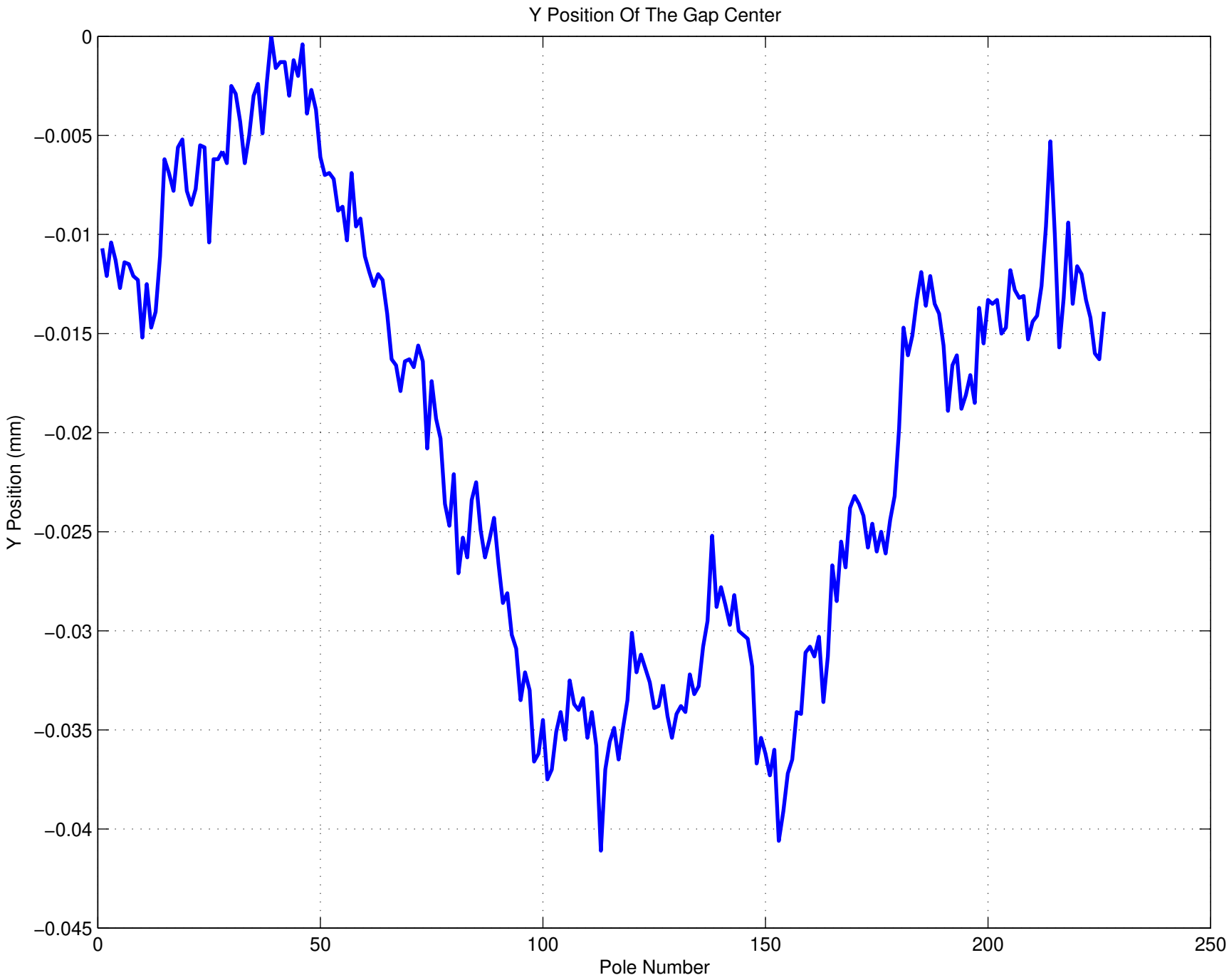
SLAC Magnetic Measurements
Mechanical Measurement Analysis

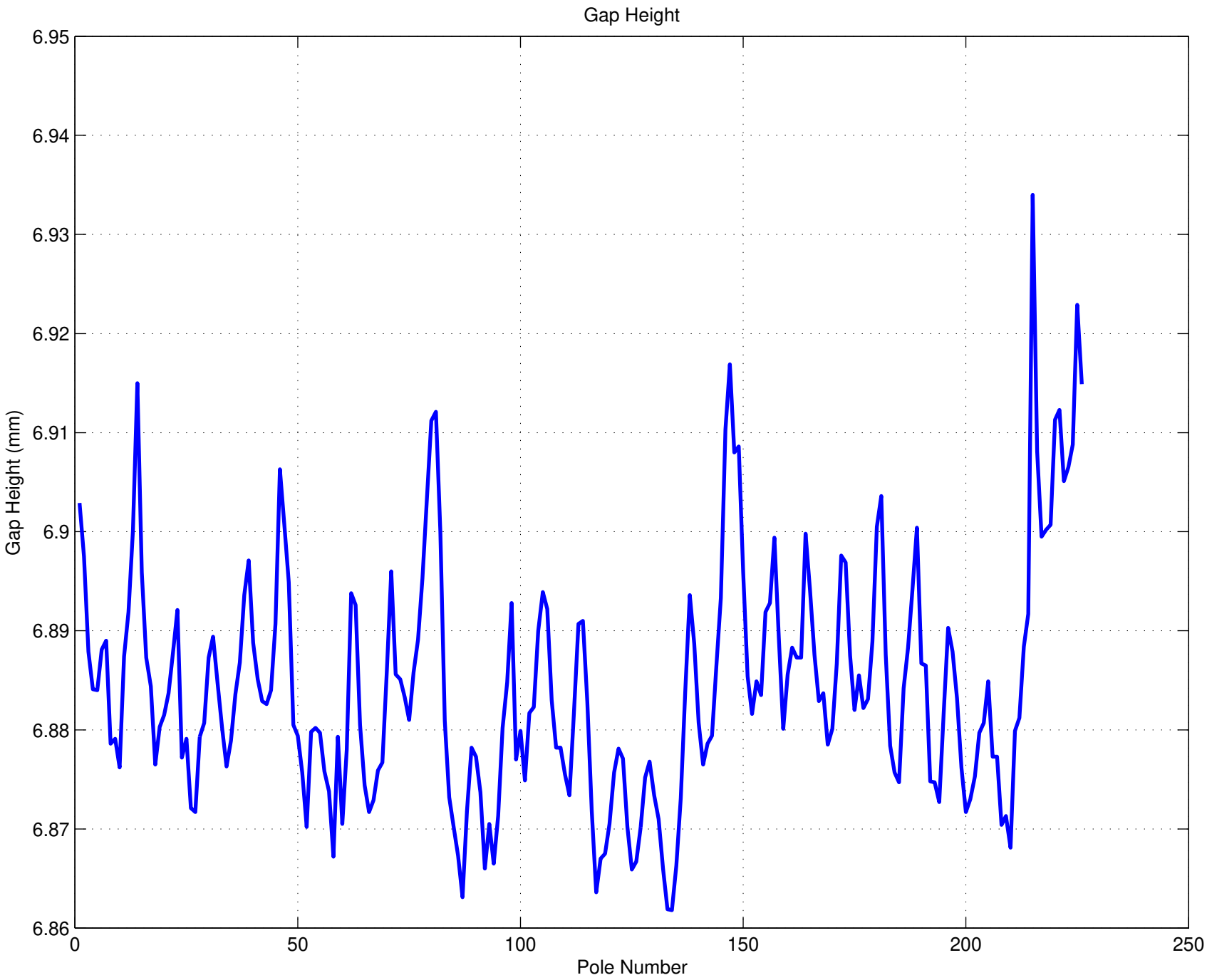
Parameters:
INPUT−FILE−DIR =V:\MET\MagServe\MagData\LCLS\Undulator\L143−112000−20\DATASET0002\Mechanical Measurements\D
INPUT−FILE−NAME =SN 20 POLE TIP DATA POINTS 21−DEC−2007.TXT

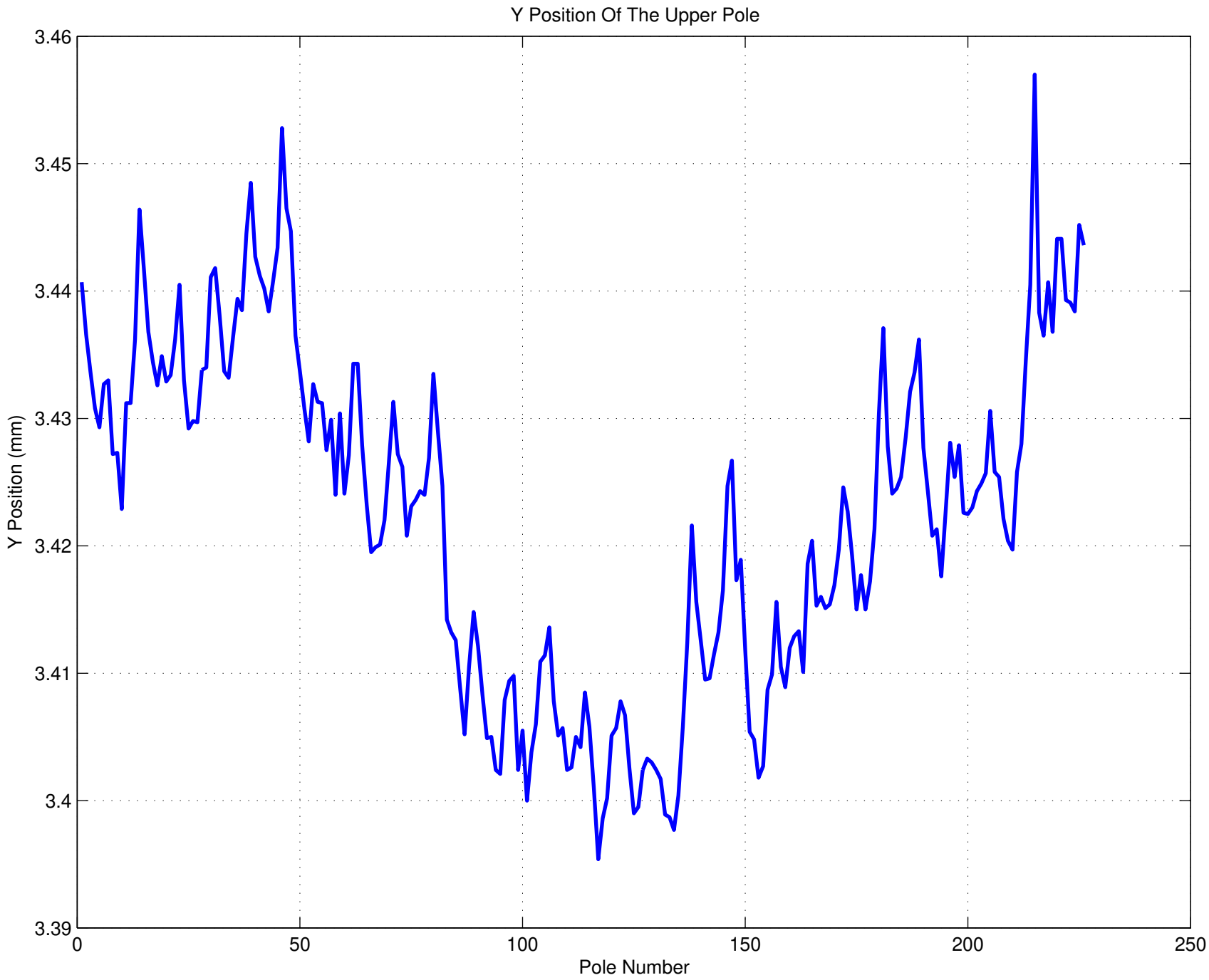

y
53 mm
135 mm
x
(x=0, y=0)
y vals
113 mm

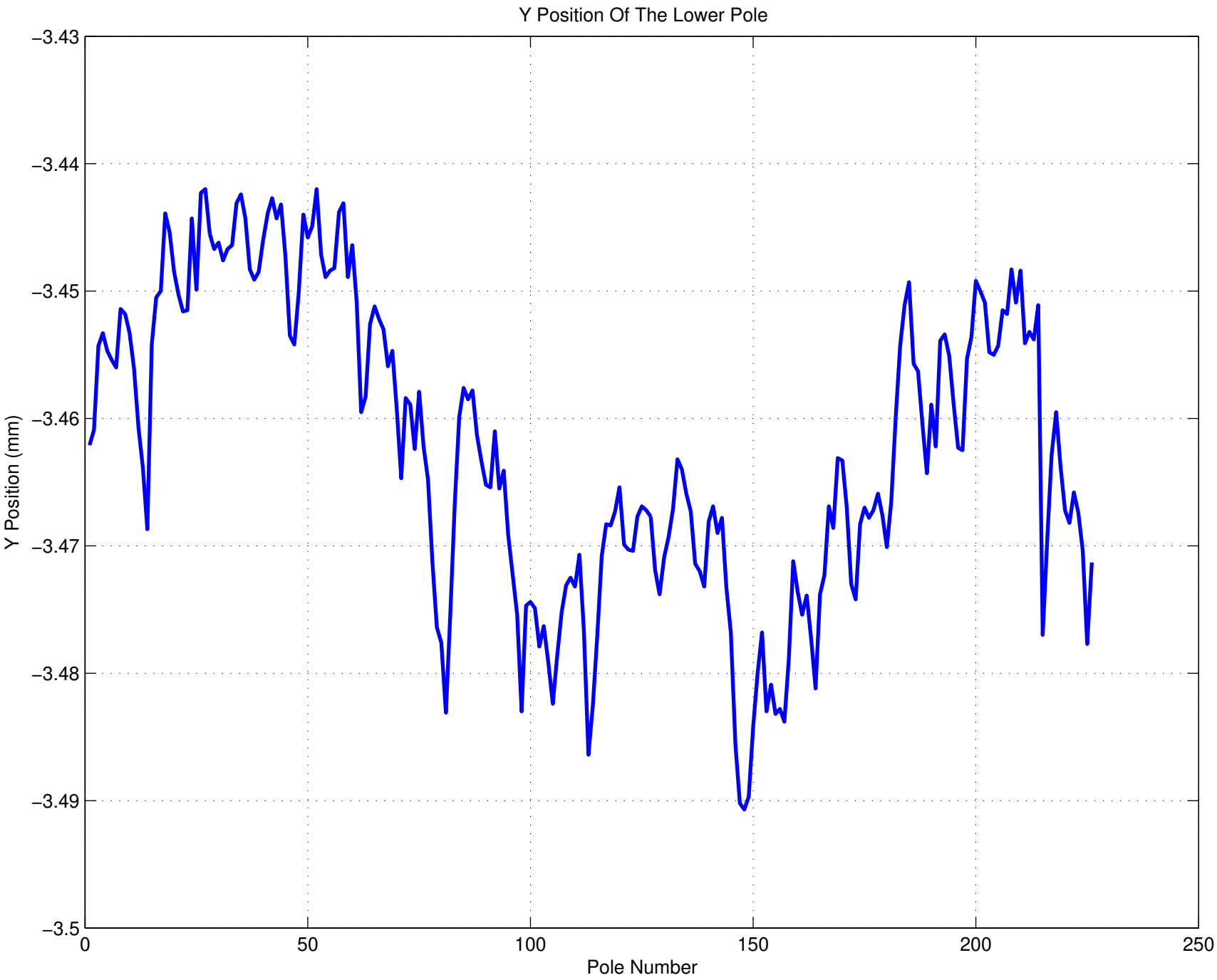

Cant Angle
Cant Angle (mrad)
Pole Number
5.7
5.6
5.5
5.4
5.3
5.2
5.1
5
4.9
4.8
4.7
0
50
100
150
200
250

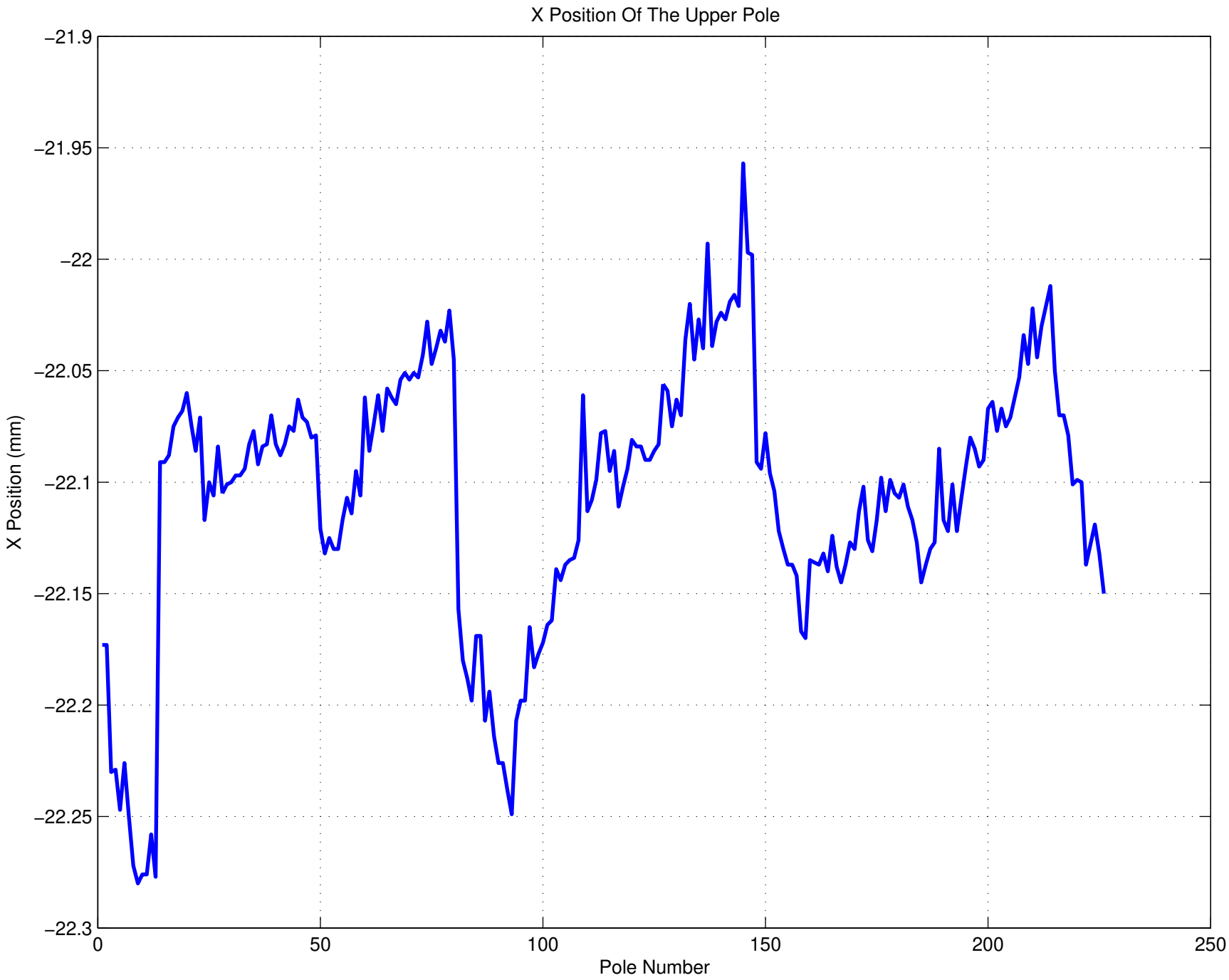

Midline Angle
Midline Angle (deg)
Pole Number
0.015
0.01
0.005
0
−0.005
−0.01
−0.015
0
50
100
150
200
250

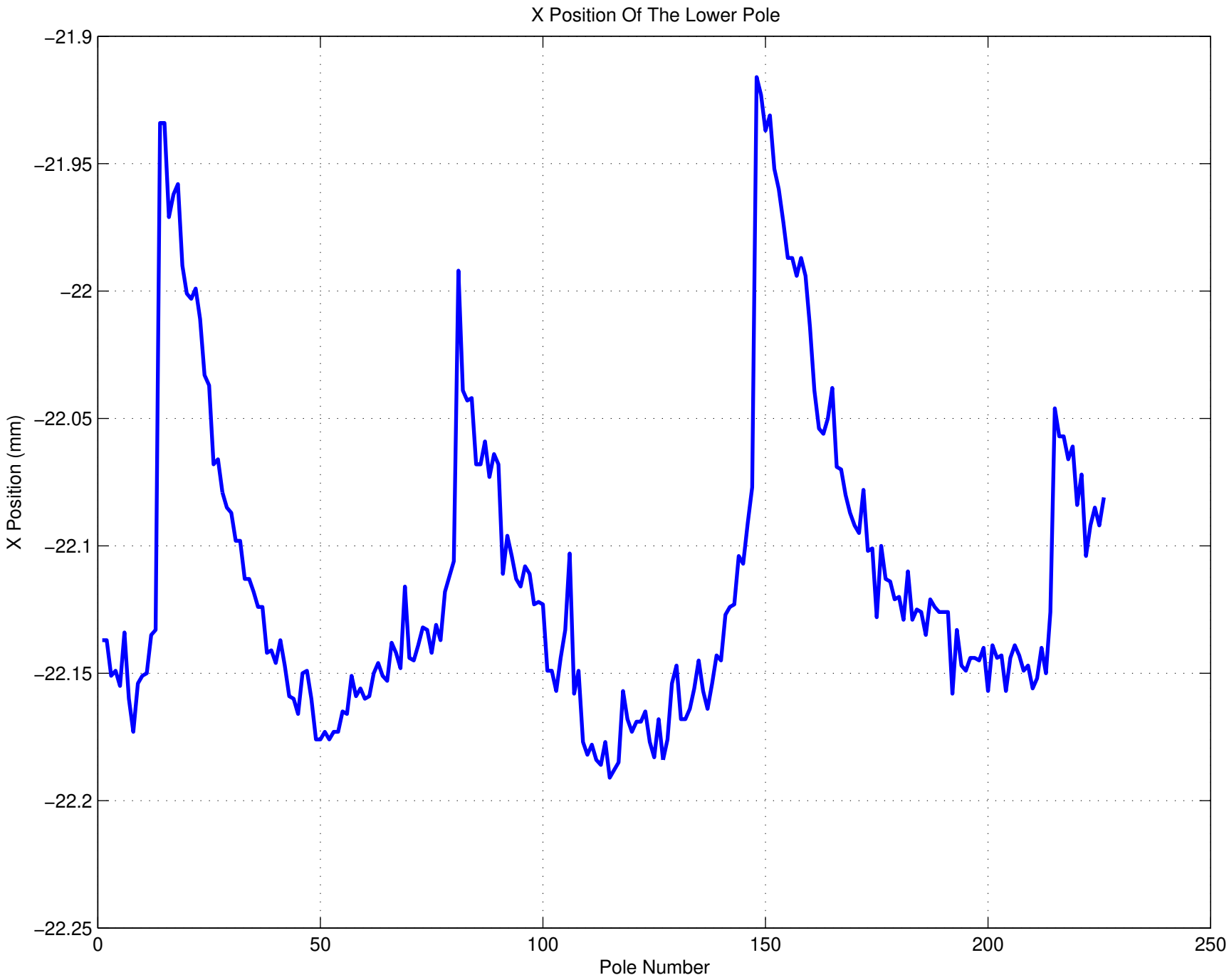

Y Position Of The Gap Center
Y Position (mm)
Pole Number
0
−0.005
−0.01
−0.015
−0.02
−0.025
−0.03
−0.035
−0.04
−0.045
0
50
100
150
200
250

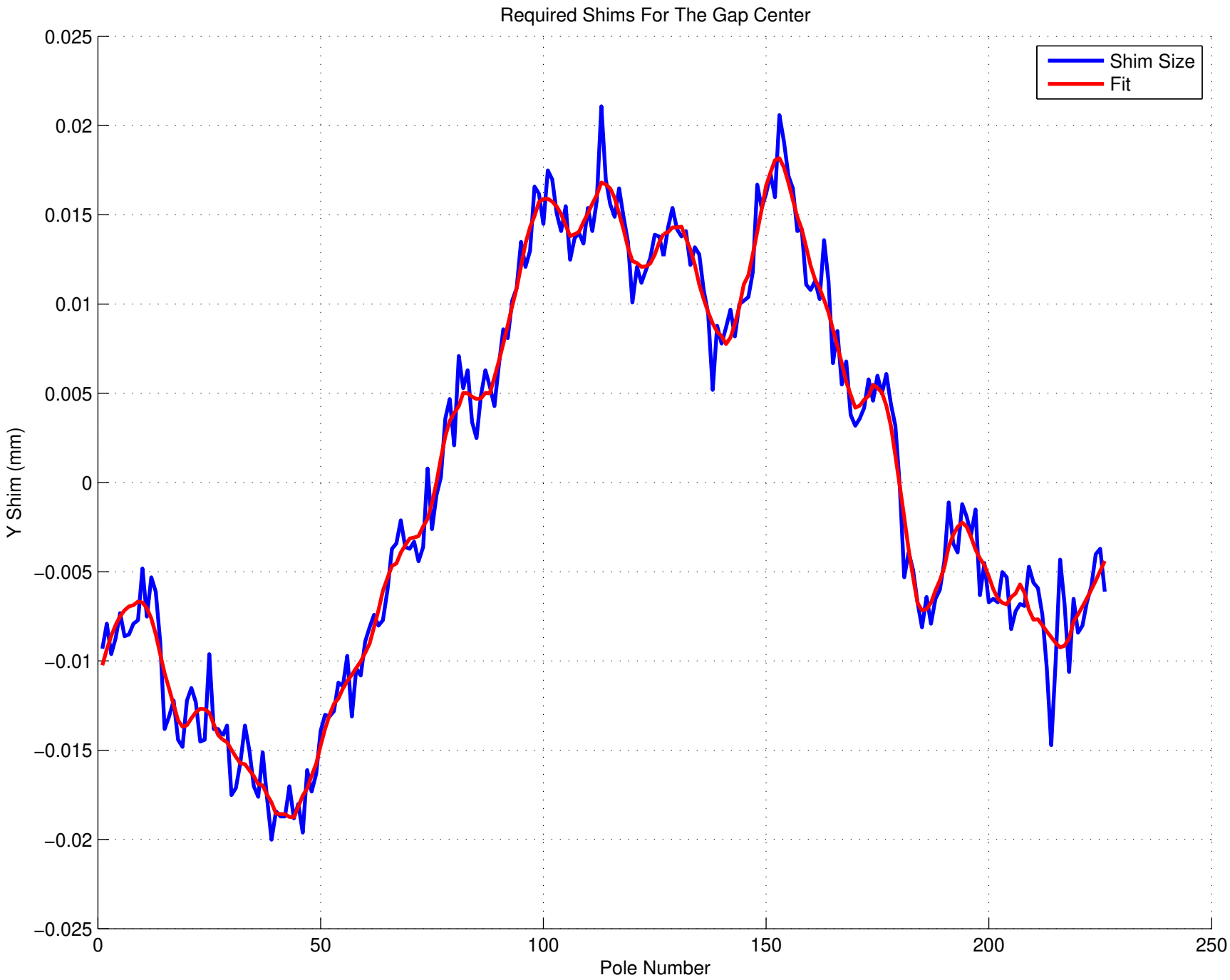

Gap Height
Gap Height (mm)
Pole Number
6.95
6.94
6.93
6.92
6.91
6.9
6.89
6.88
6.87
6.86
0
50
100
150
200
250


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


Y Position Of The Lower Pole
−3.43
−3.44
−3.45
−3.46
−3.47
−3.48
−3.49
−3.5
Y Position (mm)
0
50
100
150
200
250
Pole Number


X Position Of The Upper Pole
X Position (mm)
Pole Number
−21.9
−21.95
−22
−22.05
−22.1
−22.15
−22.2
−22.25
−22.3
0
50
100
150
200
250


X Position Of The Lower Pole
X Position (mm)
−21.9
−21.95
−22
−22.05
−22.1
−22.15
−22.2
−22.25
0
50
100
150
200
250
Pole Number


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