LCLS II-HE - SXR Undulator

Nominal Gap = 10 **Nominal Taper = -0.100**

Gap Reading = 9.9500   US Encoder = 10.0000   DS Encoder = 9.9000
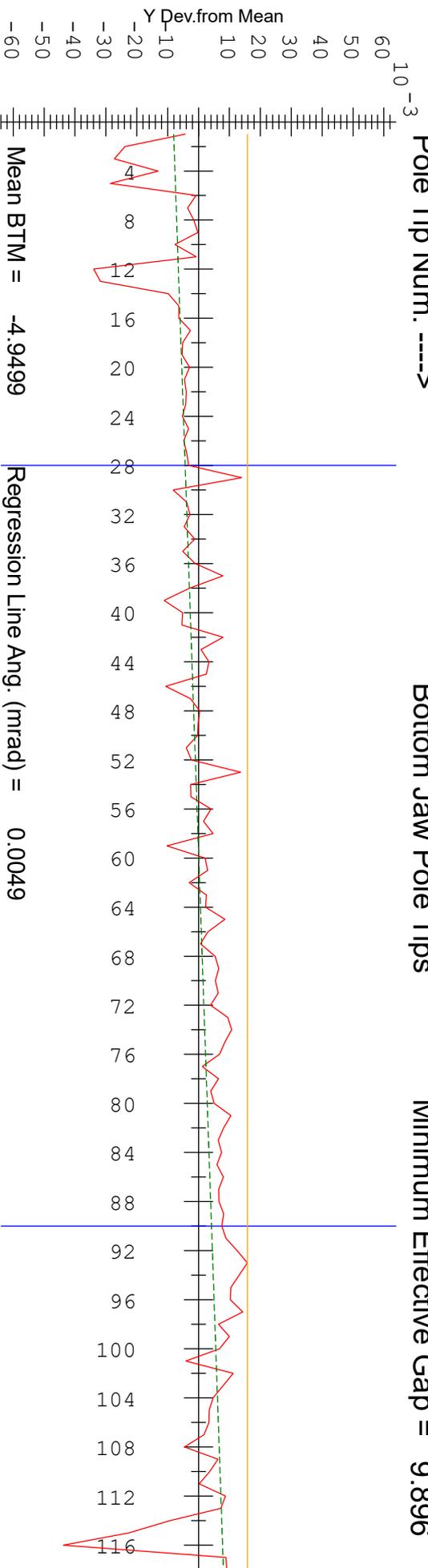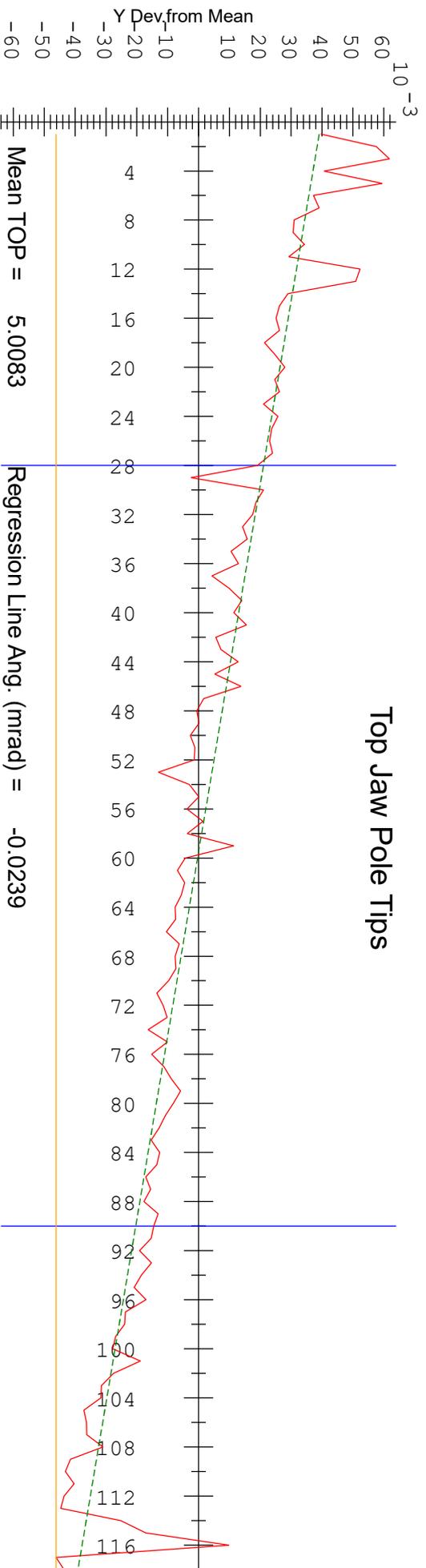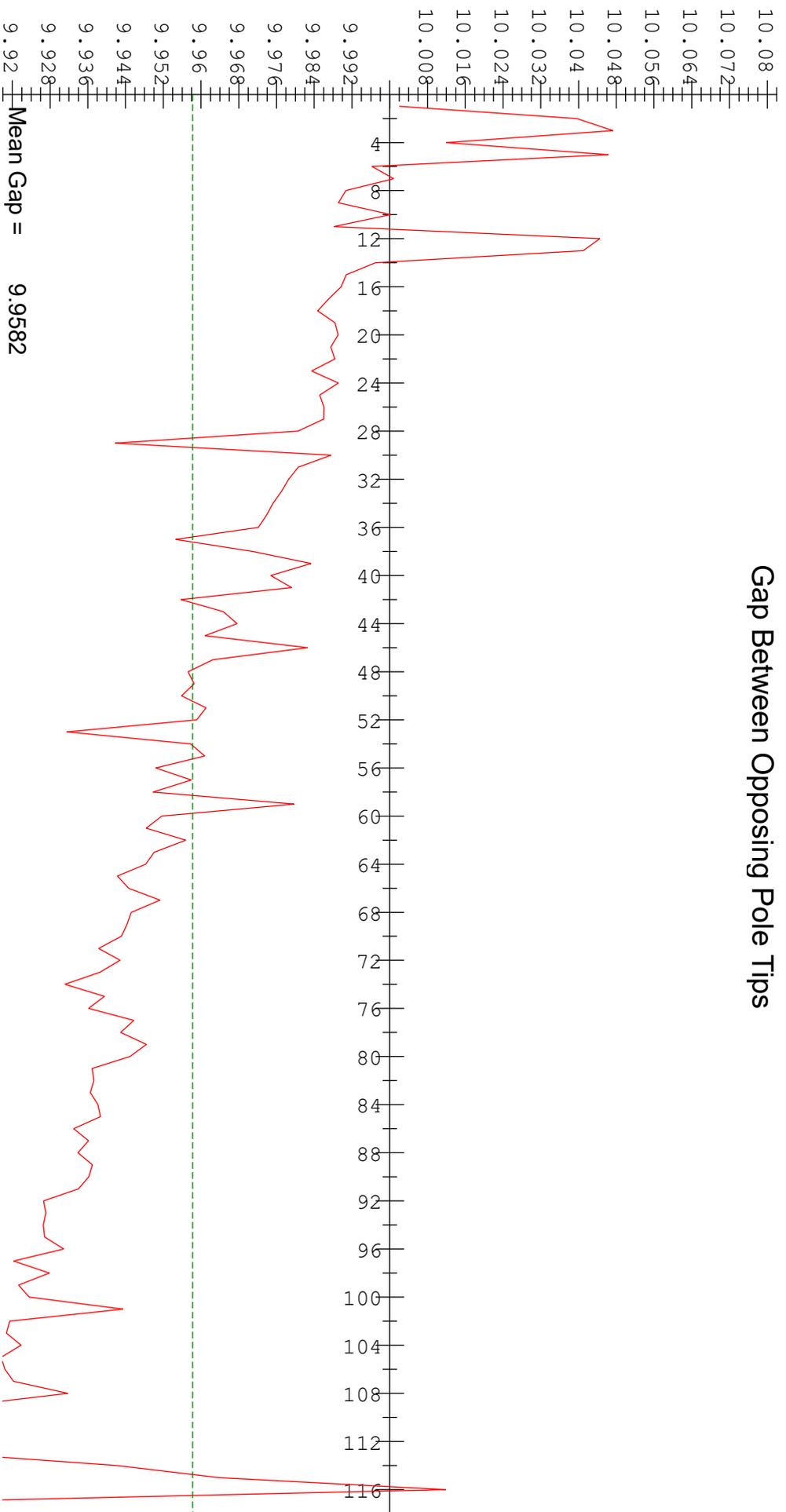
15-NOV-2024   S/N = 026   D/S= 0001   Run= 15

METROLOGY

Y Value Scales Centered on Mean Values
Step Between Measured Pole Tips = 1

Regression Line Through Points = ‒ ‒ ‒ ‒   Dimensions in mm

Top Jaw Pole Tips

Y Dev.from Mean

10^{-3}

Mean TOP = 5.0083   Regression Line Ang. (mrad) = -0.0239

Bottom Jaw Pole Tips

Minimum Effective Gap = 9.896

Y Dev.from Mean

10^{-3}

Pole Tip Num. --->

Mean BTM = -4.9499   Regression Line Ang. (mrad) = 0.0049

Y Dev.from Mean

10^{-3}

LCLS II-HE - SXR Undulator

Gap Between Opposing Pole Tips

METROLOGY

Step Between Measured Pole Tips = 1

Mean Gap = 9.9582

Nominal Gap = 10   Nominal Taper = -0.100

Gap Reading = 9.9500   US Encoder = 10.0000   DS Encoder = 9.9000

Dimensions in mm

15-NOV-2024
S/N = 026
D/S = 0001
Run= 15

Symmetry Point Between Pole Tips

10^{-3}

56
52
48
44
40
36
32
28
24
20
16
12
8
4

4
8
12
16
20
24
28
32
36
40
44
48
52
56
60
64
68
72
76
80
84
88
92
96
100
104
108
112
116

Mean Symmetry Value = 0.0292

Step Between Measured Pole Tips = 1
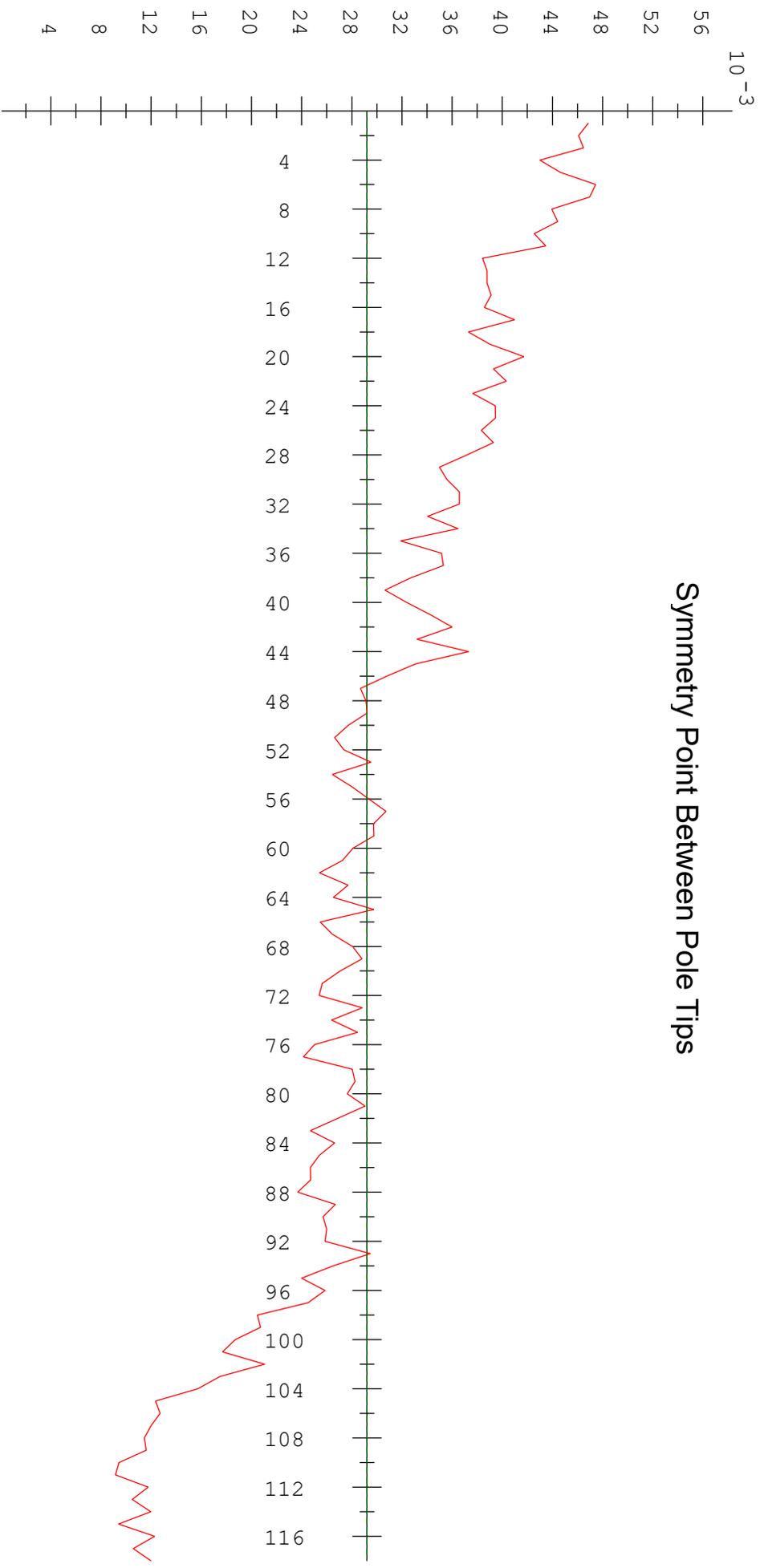
METROLOGY

LCLS II-HE - SXR Undulator

Nominal Gap = 10   Nominal Taper = -0.100

Gap Reading = 9.9500   US Encoder = 10.0000   DS Encoder = 9.9000

Dimensions in mm

15-NOV-2024
S/N = 026
D/S = 0001
Run = 15

Top and Bottom Jaw
Regression Line Intersect Points

Jaw	First Pole (Pole 1)	US Actuator (Pole 28)	DS Actuator (Pole 90)	Last Pole (Pole 118)
Top	5.0474	5.0294	4.9879	4.9692
Bottom	-4.9579	-4.9542	-4.9457	-4.9418
Gap	10.0053			9.9111
Taper				-0.0943

Summary of Mean Values

Top Jaw Poles	Btm. Jaw Poles	Gap Values	Sym. Pt. Values
5.0083	-4.9499	9.9582	0.0292

Additional Calculated Values

Bottom Pole #1 Z Value	978.602
Top Jaw Pitch (mrad)	-0.024
Bottom Jaw Pitch(mrad)	0.005
Minimum Effective Gap	9.896
Reference Block Gap	6.798

LCLS II-HE - SXR Undulator

Nominal Gap = 10   Nominal Taper = -0.100

Gap Reading = 9.9500   US Encoder = 10.0000   DS Encoder = 9.9000

METROLOGY