METROLOGY

LCLS II-HE - SXR Undulator

Nominal Gap = 10   **Nominal Taper = 0.000**

Nominal Gap = 9.9998

Gap Reading = 9.9998   US Encoder = 9.9996   DS Encoder = 10.0000

22-MAY-2024
S/N = 023
D/S = 0001
Run = 4

Top Jaw Pole Tips

Y Dev.from Mean

10 −3

−30 −24 −18 −12 −6 6 12 18 24 30

Mean TOP =   4.9821

Regression Line Ang. (mrad) =   0.0016

Bottom Jaw Pole Tips

Y Dev.from Mean

10 −3

−30 −24 −18 −12 −6 6 12 18 24 30

Pole Tip Num. --->

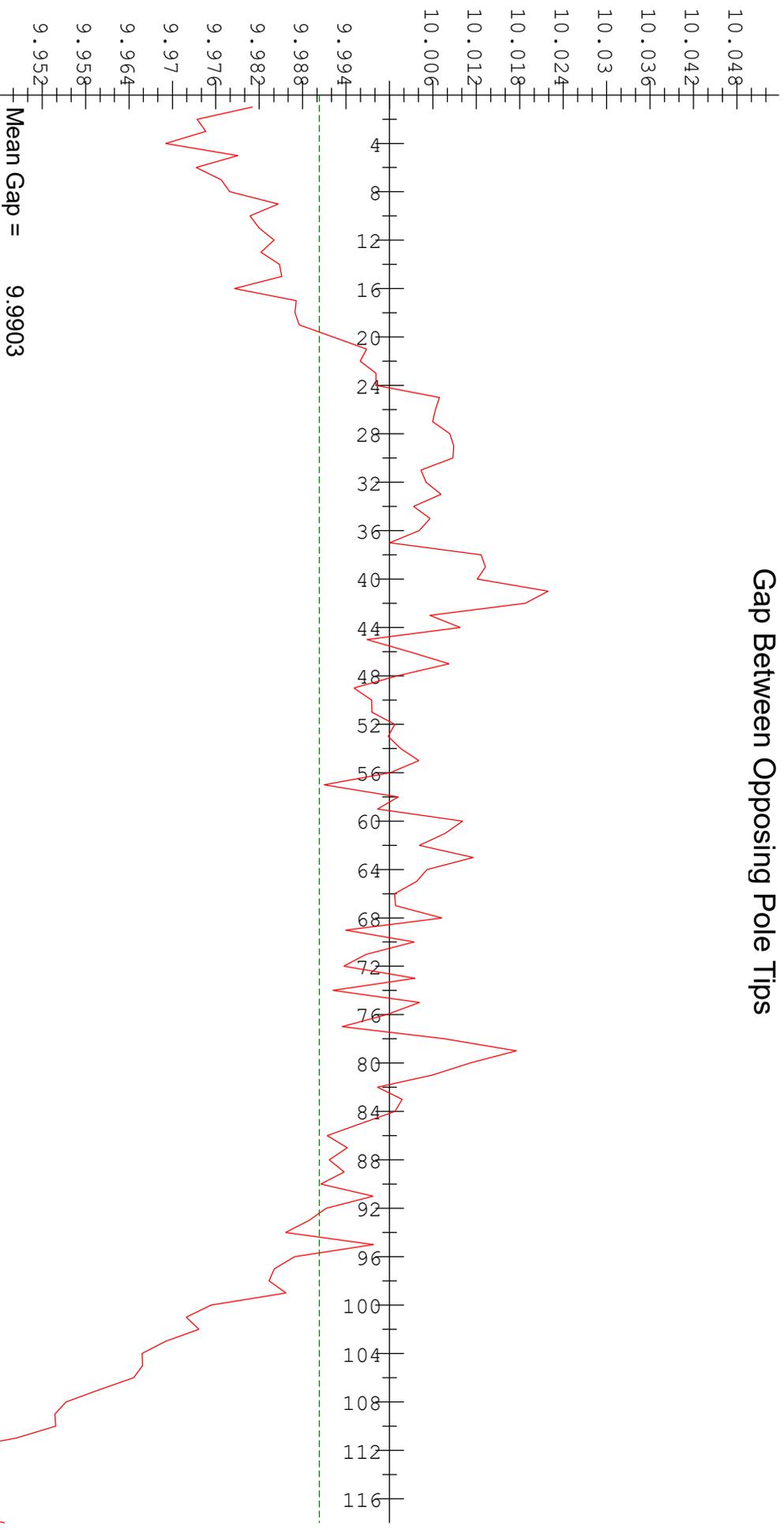Minimum Effective Gap =   9.934

Mean BTM =   -5.0081

Regression Line Ang. (mrad) =   0.0099

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

Regression Line Through Points = ‑ ‑ ‑ ‑
Dimensions in mm
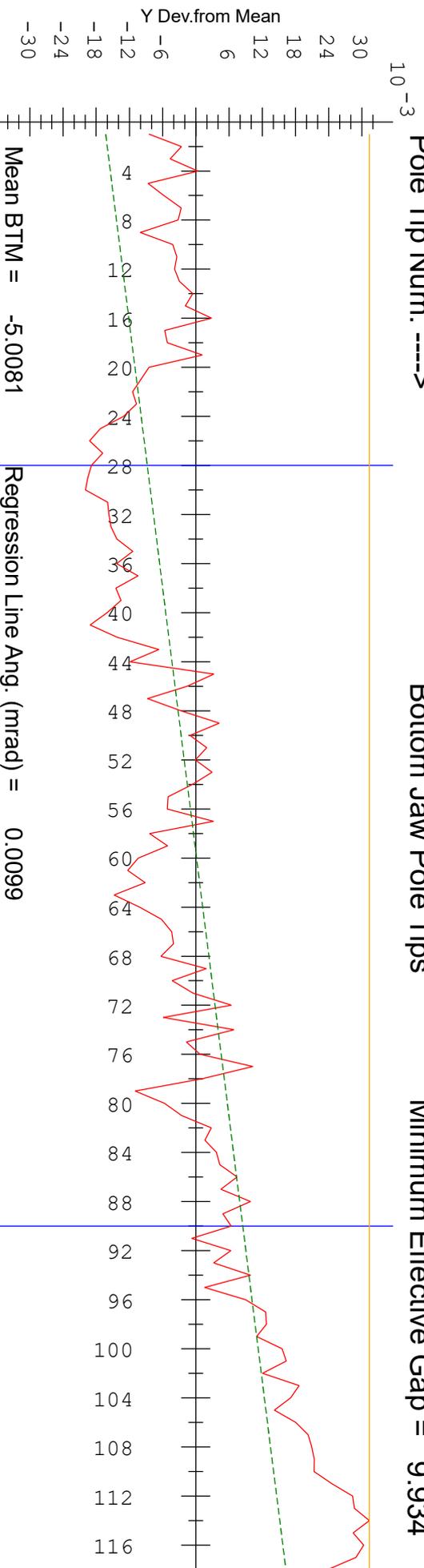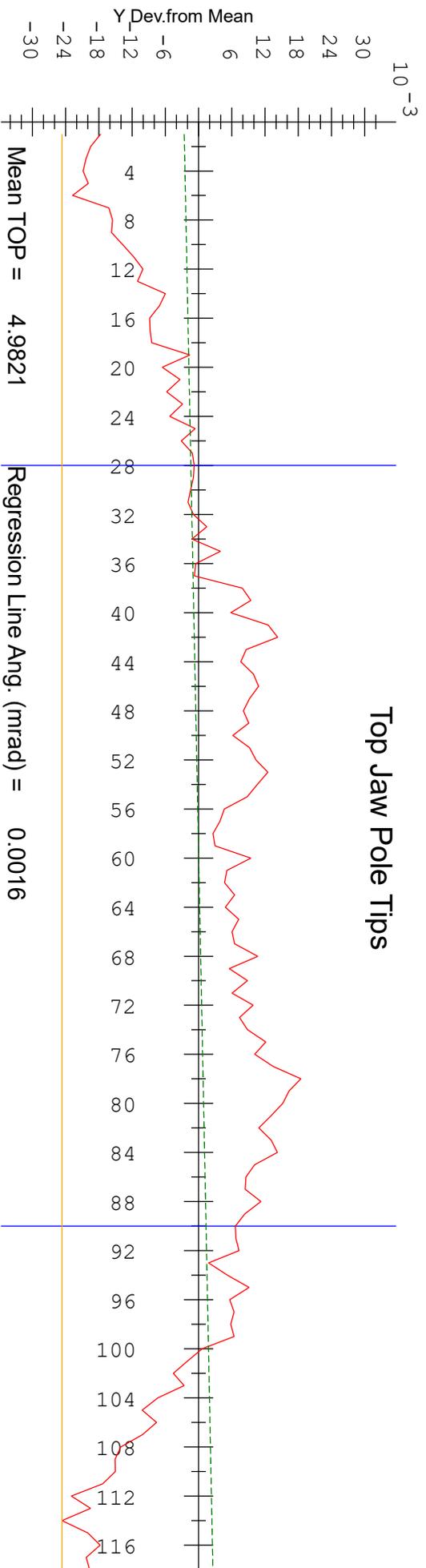
Gap Between Opposing Pole Tips

Step Between Measured Pole Tips = **1**

Mean Gap = 9.9903

LCLS II-HE - SXR Undulator

Nominal Gap = 10	Nominal Taper = 0.000	
Gap Reading = 9.9998	US Encoder = 9.9996	DS Encoder = 10.0000

Dimensions in mm

22-MAY-2024	S/N =	023
	D/S=	0001
	Run=	4

METROLOGY

Symmetry Point Between Pole Tips

METROLOGY

LCLS II-HE - SXR Undulator

Step Between Measured Pole Tips = 1
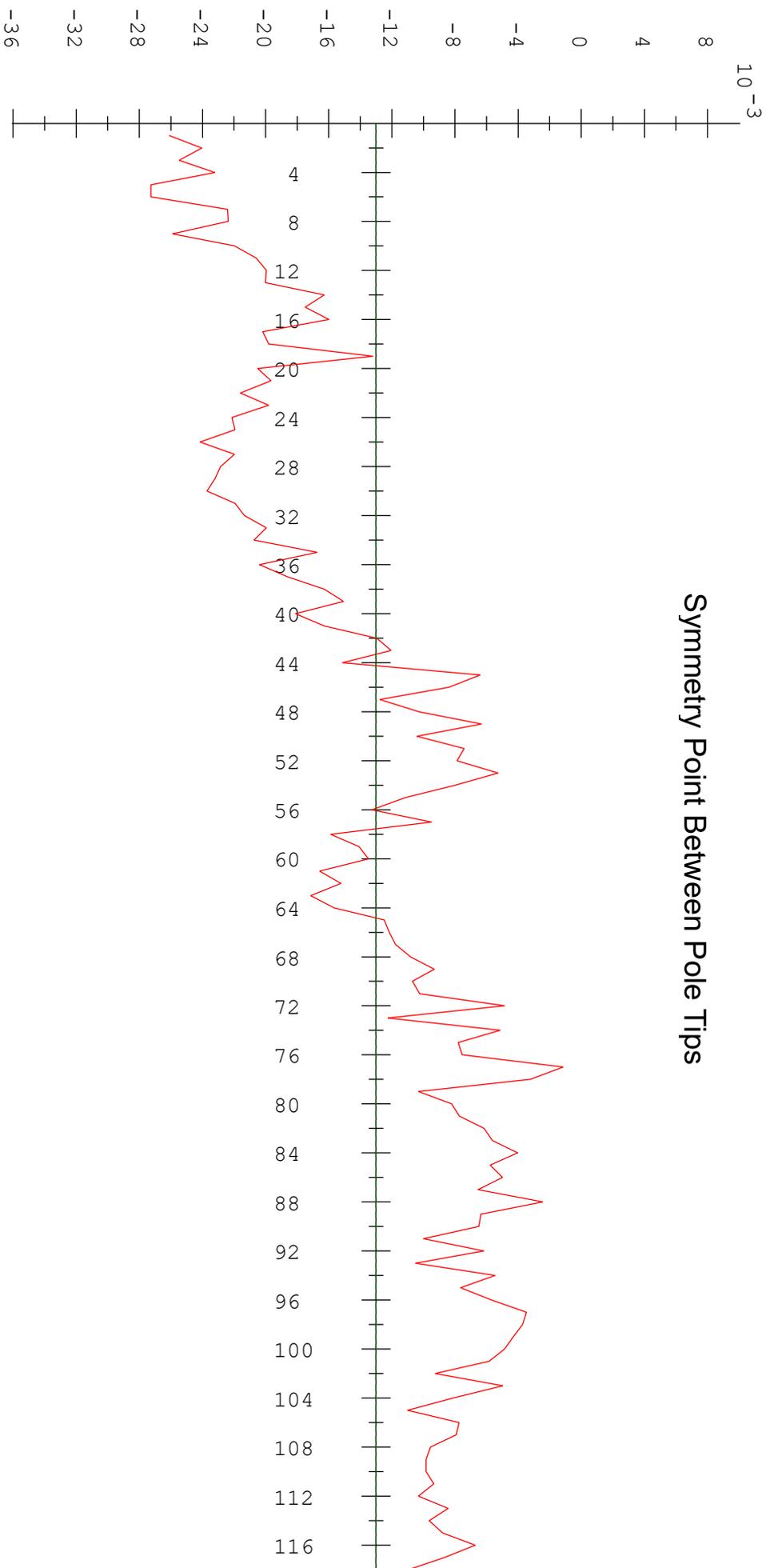
Mean Symmetry Value = -0.0130

Nominal Gap = 10	Nominal Taper = 0.000	22-MAY-2024
		S/N = 023
		D/S= 0001
Gap Reading = 9.9998	US Encoder = 9.9996	Run= 4
	DS Encoder = 10.0000	

Dimensions in mm

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	4.9795	4.9807	4.9835	4.9847
Bottom	-5.0244	-5.0169	-4.9997	-4.9919
Gap	10.0040		9.9766	
Taper				-0.0274

Summary of Mean Values

Top Jaw Poles	Btm. Jaw Poles	Gap Values	Sym. Pt. Values
4.9821	-5.0081	9.9903	-0.0130

Additional Calculated Values

Bottom Pole #1 Z Value	979.438
Top Jaw Pitch (mrad)	0.002
Bottom Jaw Pitch(mrad)	0.010
Minimum Effective Gap	9.934
Reference Block Gap	6.799

LCLS II-HE - SXR Undulator

Nominal Gap = 10   **Nominal Taper = 0.000**

Gap Reading = 9.9998   US Encoder = 9.9996   DS Encoder = 10.0000

22-MAY-2024
S/N =   023
D/S=   0001
Run=   4

Dimensions in mm