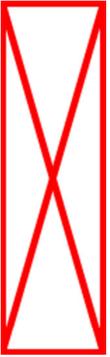# LCLS II-HE - SXR Undulator

METROLOGY

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

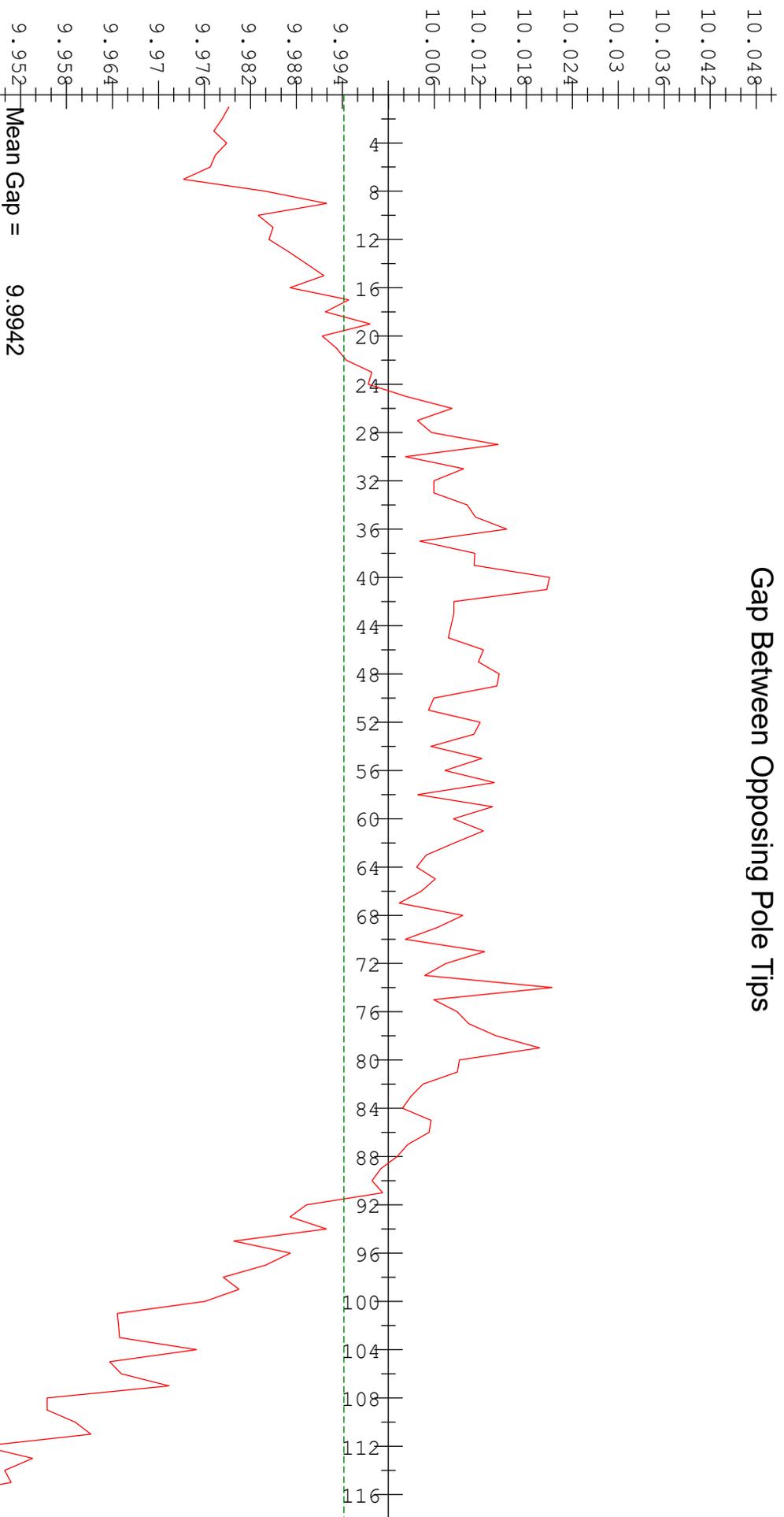Regression Line Through Points =
Dimensions in mm

Nominal Gap = 10   **Nominal Taper = 0.000**
Gap Reading = 10.0000   US Encoder = 10.0000   DS Encoder = 10.0000

20-SEP-2024
S/N = 024
D/S= 0001
Run= 1

Y Dev.from Mean

Top Jaw Pole Tips

Mean TOP = 5.0011   Regression Line Ang. (mrad) = 0.0101

Y Dev.from Mean

Bottom Jaw Pole Tips   Minimum Effective Gap = 9.911

Pole Tip Num. --->

Y Dev.from Mean

Mean BTM = -4.9931   Regression Line Ang. (mrad) = 0.0183

LCLS II-HE - SXR Undulator

Gap Between Opposing Pole Tips

Dimensions in mm

Step Between Measured Pole Tips =   1

Mean Gap =   9.9942

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

METROLOGY

20-SEP-2024
S/N =   024
D/S=   0001
Run=   1

LCLS II-HE - SXR Undulator

Symmetry Point Between Pole Tips
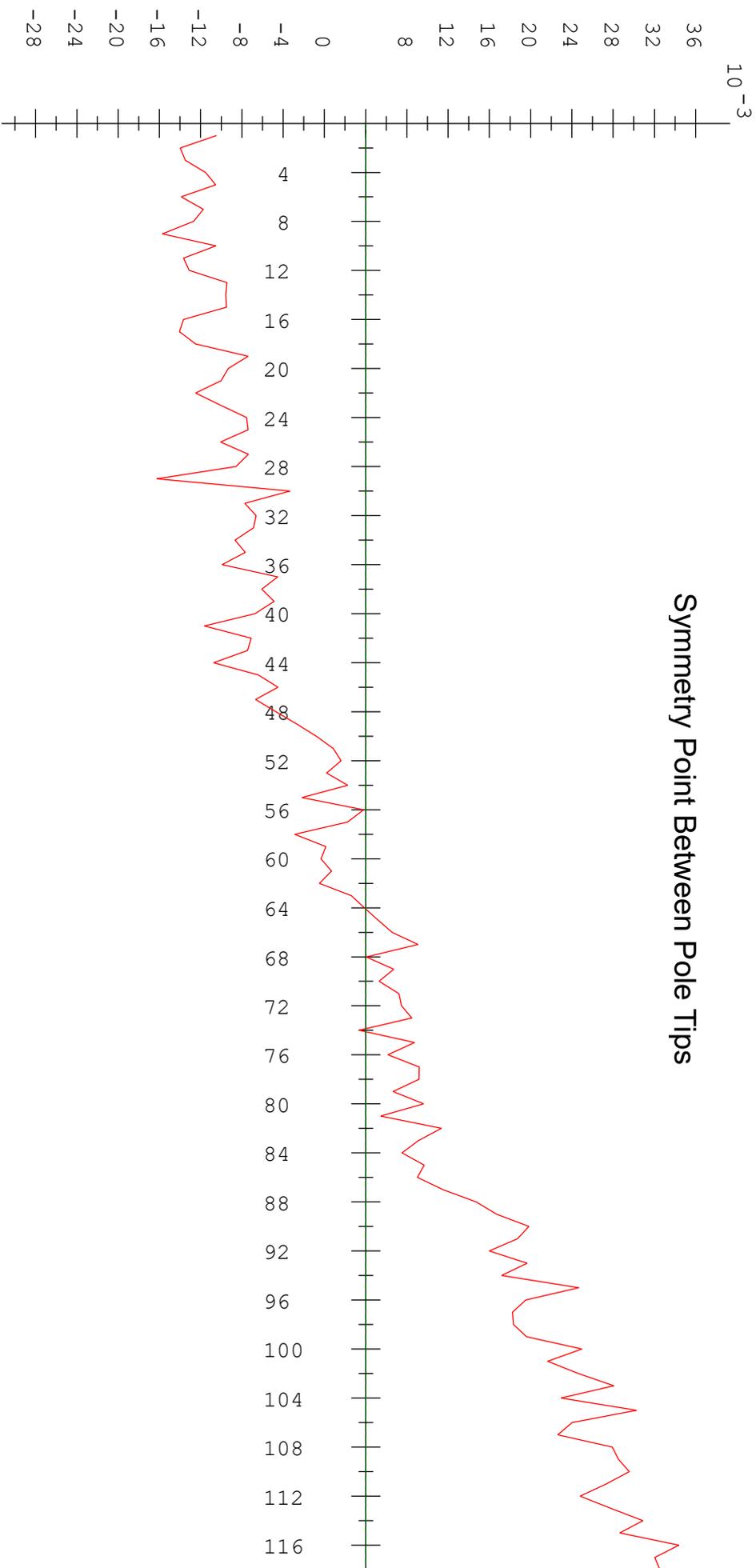
Mean Symmetry Value = 0.0040

Step Between Measured Pole Tips = 1

Dimensions in mm

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

20-SEP-2024	S/N = 024
	D/S = 0001
Run=	1

METROLOGY

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	4.9846	4.9922	5.0097	5.0176
Bottom	-5.0231	-5.0092	-4.9774	-4.9631
Gap	10.0077		9.9807	
Taper				-0.0270

Summary of Mean Values

Top Jaw Poles	Btm. Jaw Poles	Gap Values	Sym. Pt. Values
5.0011	-4.9931	9.9942	0.0040

Additional Calculated Values

Bottom Pole #1 Z Value	978.595
Top Jaw Pitch (mrad)	0.010
Bottom Jaw Pitch(mrad)	0.018
Minimum Effective Gap	9.911
Reference Block Gap	6.799

METROLOGY

LCLS II-HE - SXR Undulator

Nominal Gap = 10   Nominal Taper = 0.000

Gap Reading = 10.0000   US Encoder = 10.0000   DS Encoder = 10.0000

Nominal Gap = 10.0000

20-SEP-2024
S/N = 024
D/S= 0001
Run= 1

Dimensions in mm