LCLS II-HE - SXR Undulator

METROLOGY

Top Jaw Pole Tips

Y Dev.from Mean

Y Dev.from Mean

Mean TOP = 6.5108

Regression Line Ang. (mrad) = 0.0456

Pole Tip Num. --->

Bottom Jaw Pole Tips

Minimum Effective Gap = 9.965
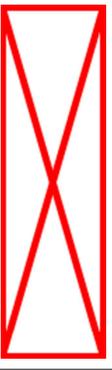
Mean BTM = -3.5551

Regression Line Ang. (mrad) = 0.0097

Y Value Scales Centered on Mean Values

Step Between Measured Pole Tips = 1

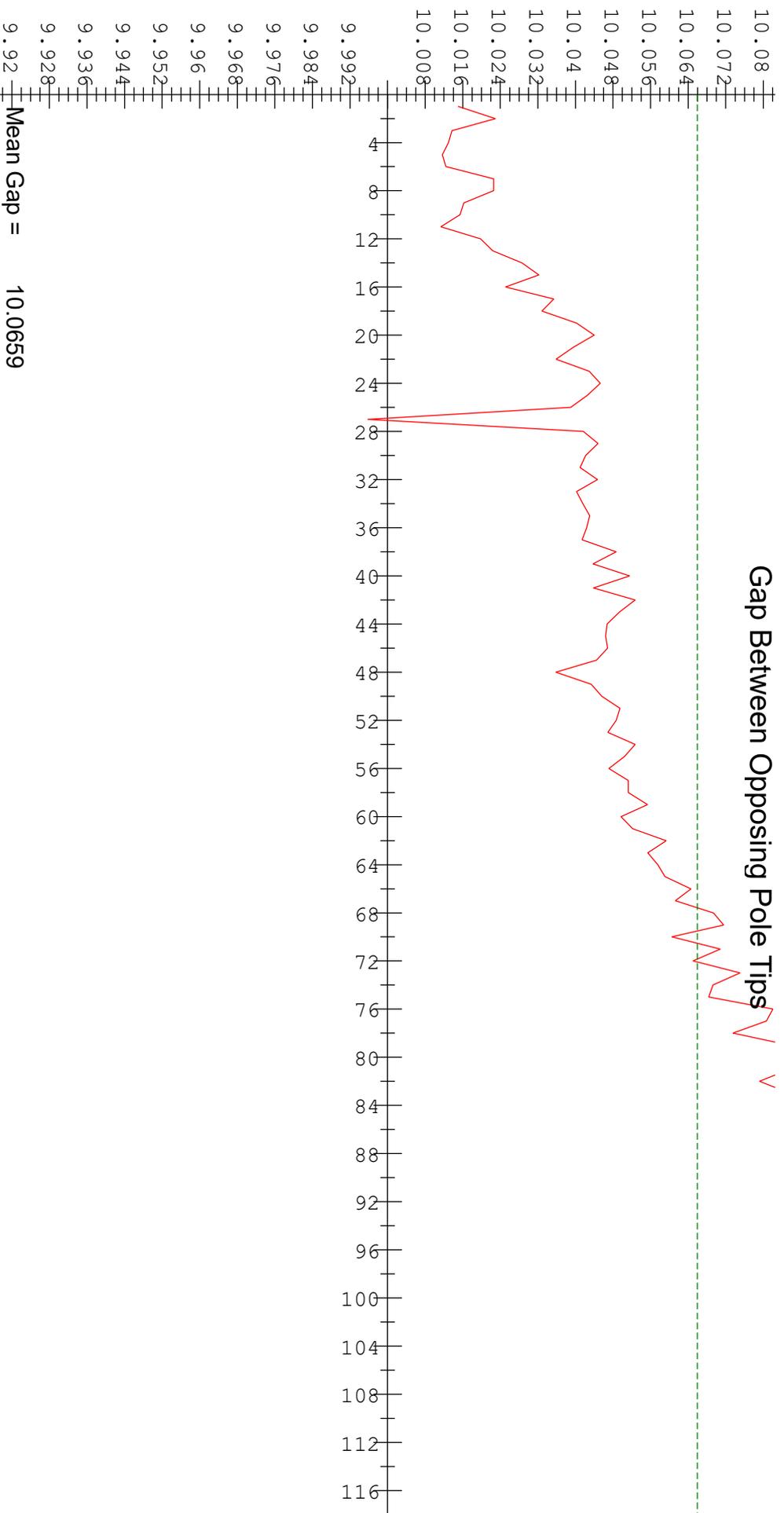Regression Line Through Points = - - - - -

Dimensions in mm

Nominal Gap = 10   Nominal Taper = 0.000

Gap Reading = 10.0004   US Encoder = 10.0003   DS Encoder = 10.0005

13-JUN-2025
S/N =   006
D/S=   0001
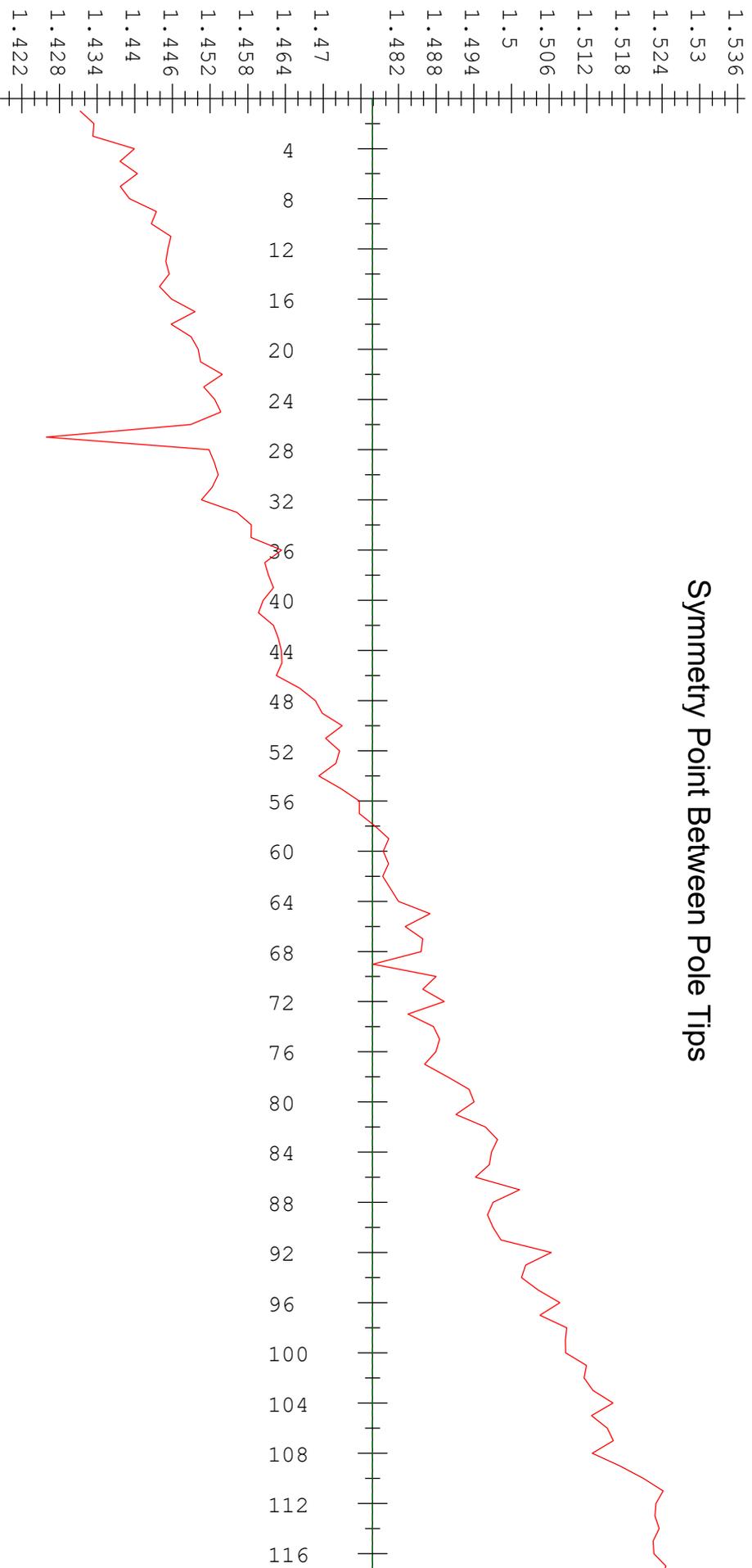Run=   1

Gap Between Opposing Pole Tips

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

Gap Reading = 10.0004   US Encoder = 10.0003   DS Encoder = 10.0005

Step Between Measured Pole Tips = **1**

Mean Gap =   10.0659

METROLOGY

Dimensions in mm

13-JUN-2025
S/N =   006
D/S=   0001
Run=   1

Symmetry Point Between Pole Tips

METROLOGY

LCLS II-HE - SXR Undulator

Mean Symmetry Value = 1.4779

Step Between Measured Pole Tips = 1

Nominal Gap = 10 Nominal Taper = 0.000

Gap Reading = 10.0004 US Encoder = 10.0003 DS Encoder = 10.0005

Dimensions in mm

13-JUN-2025
S/N = 006
D/S = 0001
Run = 1

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	6.4361	6.4706	6.5498	6.5855
Bottom	-3.5709	-3.5636	-3.5468	-3.5393
Gap	10.0071		10.1248	
Taper				0.1177

Summary of Mean Values

Top Jaw Poles	Btm. Jaw Poles	Gap Values	Sym. Pt. Values
6.5108	-3.5551	10.0659	1.4779

Additional Calculated Values

Bottom Pole #1 Z Value	978.686
Top Jaw Pitch (mrad)	0.046
Bottom Jaw Pitch(mrad)	0.010
Minimum Effective Gap	9.965
Reference Block Gap	6.797

METROLOGY

LCLS II-HE - SXR Undulator

Nominal Gap = 10   Nominal Taper = 0.000
Gap Reading = 10.0004   US Encoder = 10.0003   DS Encoder = 10.0005

13-JUN-2025
S/N = 006
D/S= 0001
Run= 1

Dimensions in mm