LCLS II-HE - SXR Undulator

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

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

Gap Reading = 9.9500

METROLOGY

Top Jaw Pole Tips

Y Dev.from Mean

Mean TOP = 5.4685   Regression Line Ang. (mrad) = -0.0168

Pole Tip Num. --->   Bottom Jaw Pole Tips   Minimum Effective Gap = 9.875

Y Dev.from Mean

Mean BTM = -4.4968   Regression Line Ang. (mrad) = 0.0122
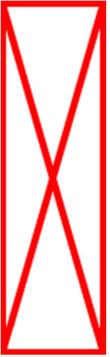
Y Value Scales Centered on Mean Values
Step Between Measured Pole Tips = 1
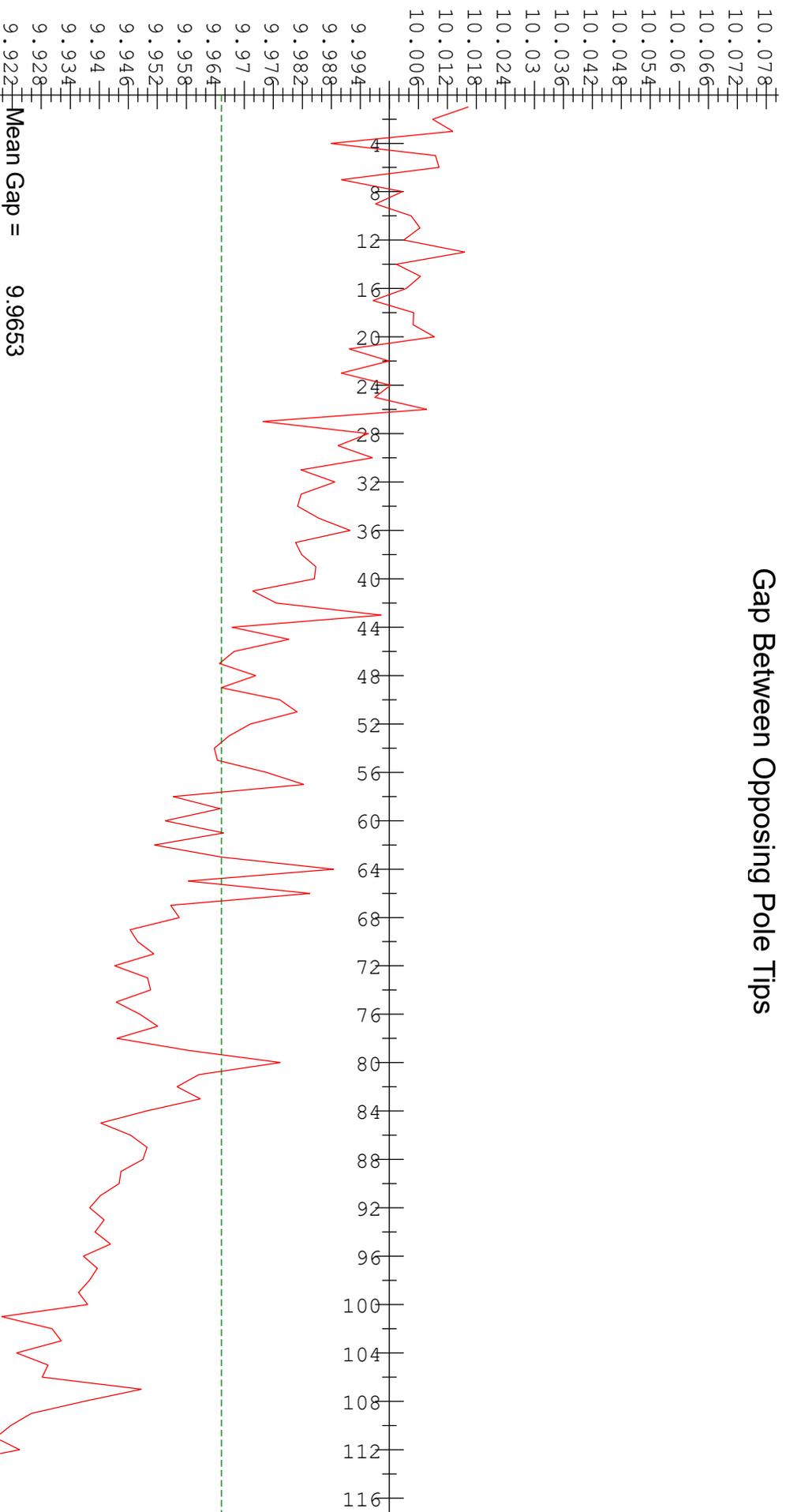
Regression Line Through Points = ⎯ ⎯
Dimensions in mm

04-DEC-2025
S/N = 007
D/S = 0001
Run = 6

Gap Between Opposing Pole Tips

METROLOGY

Step Between Measured Pole Tips = 1

Mean Gap = 9.9653

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

04-DEC-2025
S/N = 007
D/S = 0001
Run = 6

LCLS II-HE - SXR Undulator

Symmetry Point Between Pole Tips
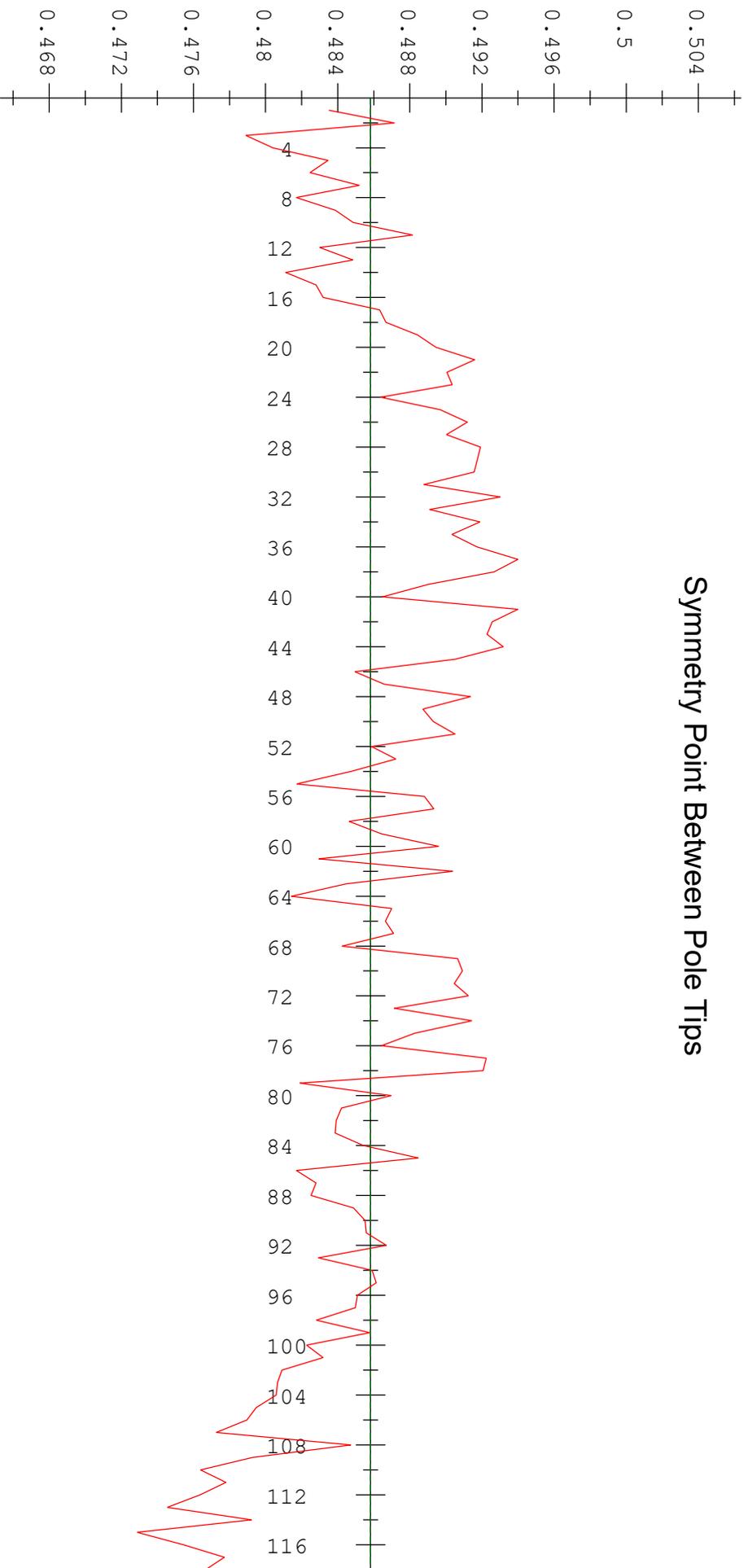
Mean Symmetry Value = 0.4858

Step Between Measured Pole Tips = 1

Nominal Gap = 10	Nominal Taper = -0.100
Gap Reading = 9.9500	US Encoder = 10.0000	DS Encoder = 9.9000

METROLOGY

04-DEC-2025	
S/N =	007
D/S =	0001
Run =	6

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	5.4960	5.4833	5.4541	5.4409
Bottom	-4.5168	-4.5076	-4.4864	-4.4768
Gap	10.0128		9.9178	
Taper				-0.0950

Summary of Mean Values

Top Jaw Poles	Btm. Jaw Poles	Gap Values	Sym. Pt. Values
5.4685	-4.4968	9.9653	0.4858

Additional Calculated Values

Bottom Pole #1 Z Value	979.313
Top Jaw Pitch (mrad)	-0.017
Bottom Jaw Pitch(mrad)	0.012
Minimum Effective Gap	9.875
Reference Block Gap	6.797

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

Dimensions in mm