

Y Value Scales Centered on Mean Values  
 Step Between Measured Pole Tips = 5

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



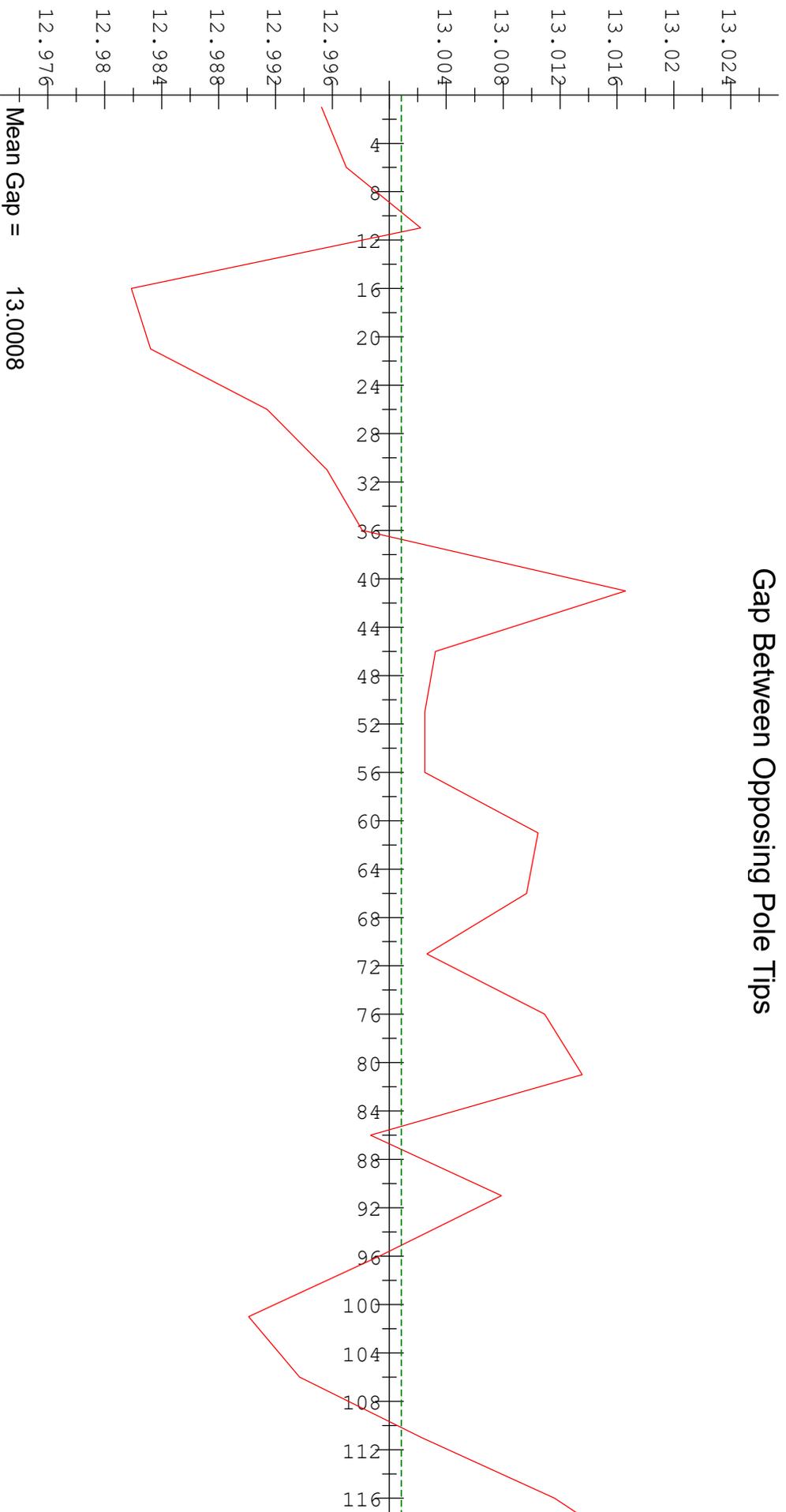
METROLOGY

# LCLS II-HE - SXR Undulator

Nominal Gap = 13  
 Gap Reading = 13.0000  
 US Encoder = 13.0000  
 Nominal Taper = 0.000  
 DS Encoder = 13.0000

23-MAY-2024  
 S/N = 023  
 D/S = 0001  
 Run = 12

# Gap Between Opposing Pole Tips



Step Between Measured Pole Tips = 5

Dimensions in mm



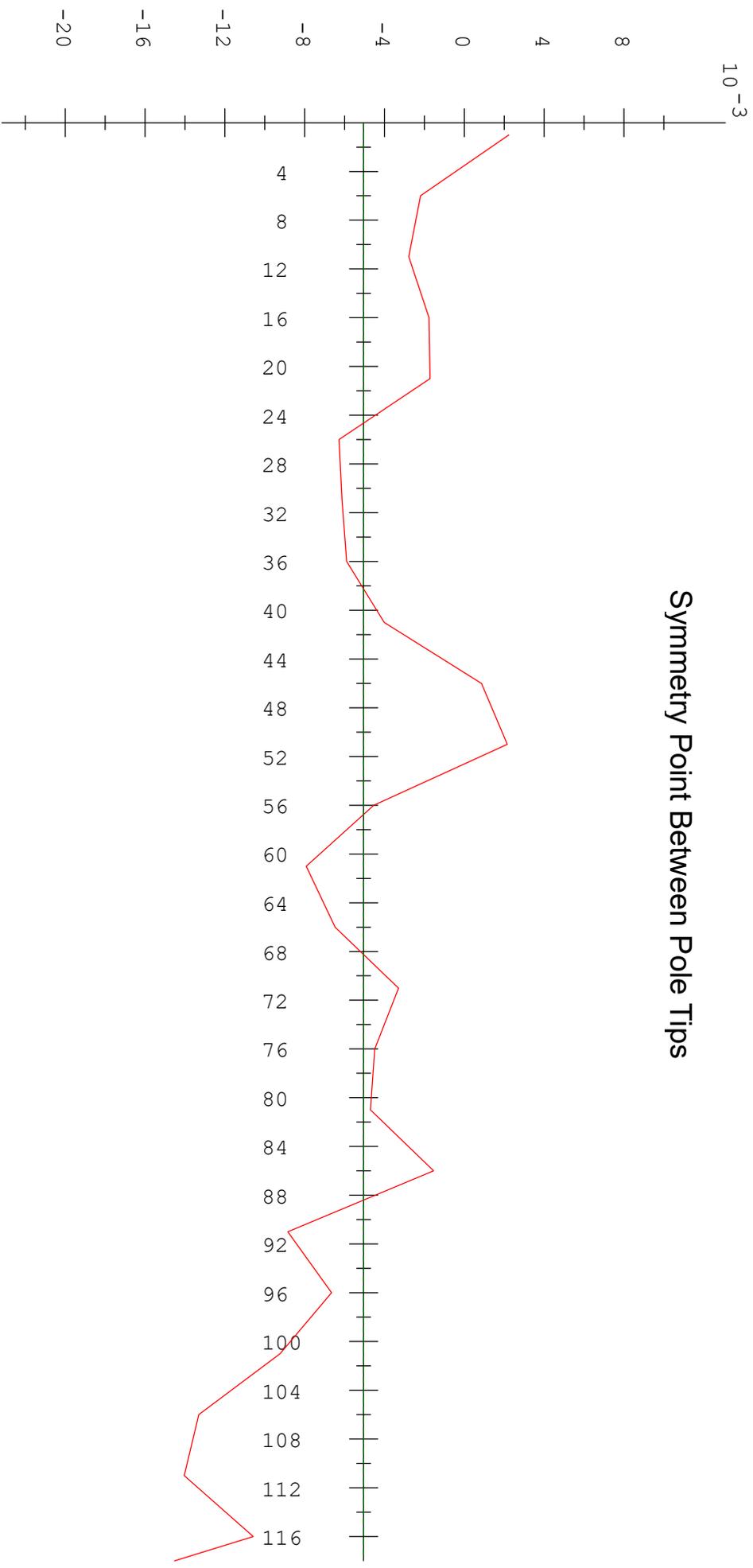
METROLOGY

## LCLS II-HE - SXR Undulator

Nominal Gap = 13      Nominal Taper = 0.000  
Gap Reading = 13.0000      US Encoder = 13.0000      DS Encoder = 13.0000

23-MAY-2024  
S/N = 023  
D/S = 0001  
Run = 12

### Symmetry Point Between Pole Tips



Mean Symmetry Value = -0.0050

Step Between Measured Pole Tips = 5

Dimensions in mm



METROLOGY

## LCLS II-HE - SXR Undulator

Nominal Gap = 13      Nominal Taper = 0.000  
Gap Reading = 13.0000      US Encoder = 13.0000      DS Encoder = 13.0000

23-MAY-2024  
S/N = 023  
D/S = 0001  
Run = 12

## Top and Bottom Jaw Regression Line Intersect Points

| Jaw           | First Pole<br><i>(Pole -1)</i> | US Actuator<br><i>(Pole 28)</i> | DS Actuator<br><i>(Pole 90)</i> | Last Pole<br><i>(Pole 118)</i> |
|---------------|--------------------------------|---------------------------------|---------------------------------|--------------------------------|
| <b>Top</b>    | 6.4976                         | 6.4965                          | 6.4941                          | 6.4931                         |
| <b>Bottom</b> | -6.4974                        | -6.5013                         | -6.5104                         | -6.5145                        |
| <b>Gap</b>    | 12.9949                        |                                 |                                 | 13.0075                        |
| <b>Taper</b>  |                                |                                 |                                 | 0.0126                         |

## Summary of Mean Values

| Top Jaw Poles | Btm. Jaw Poles | Gap Values | Sym. Pt. Values |
|---------------|----------------|------------|-----------------|
| 6.4954        | -6.5055        | 13.0008    | -0.0050         |

## Additional Calculated Values

|                               |         |
|-------------------------------|---------|
| <b>Bottom Pole #1 Z Value</b> | 979.438 |
| <b>Top Jaw Pitch (mrad)</b>   | -0.001  |
| <b>Bottom Jaw Pitch(mrad)</b> | -0.005  |
| <b>Minimum Effective Gap</b>  | 12.976  |
| <b>Reference Block Gap</b>    | 6.799   |

Dimensions in mm



METROLOGY

## LCLS II-HE - SXR Undulator

Nominal Gap = 13      Nominal Taper = 0.000  
 Gap Reading = 13.0000      US Encoder = 13.0000      DS Encoder = 13.0000

23-MAY-2024  
 S/N = 023  
 D/S = 0001  
 Run = 12