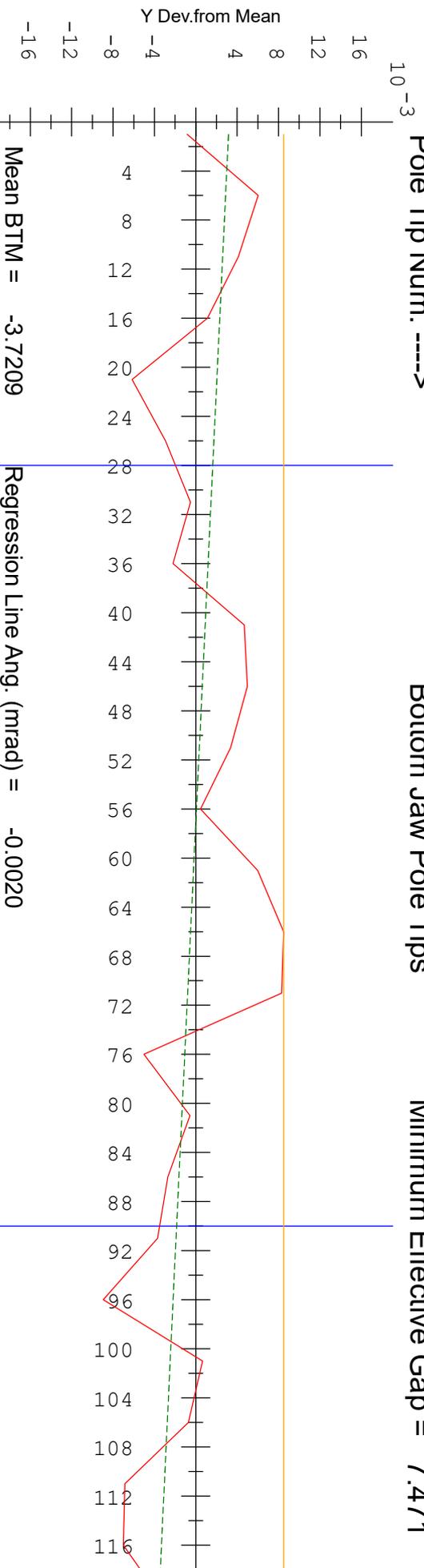
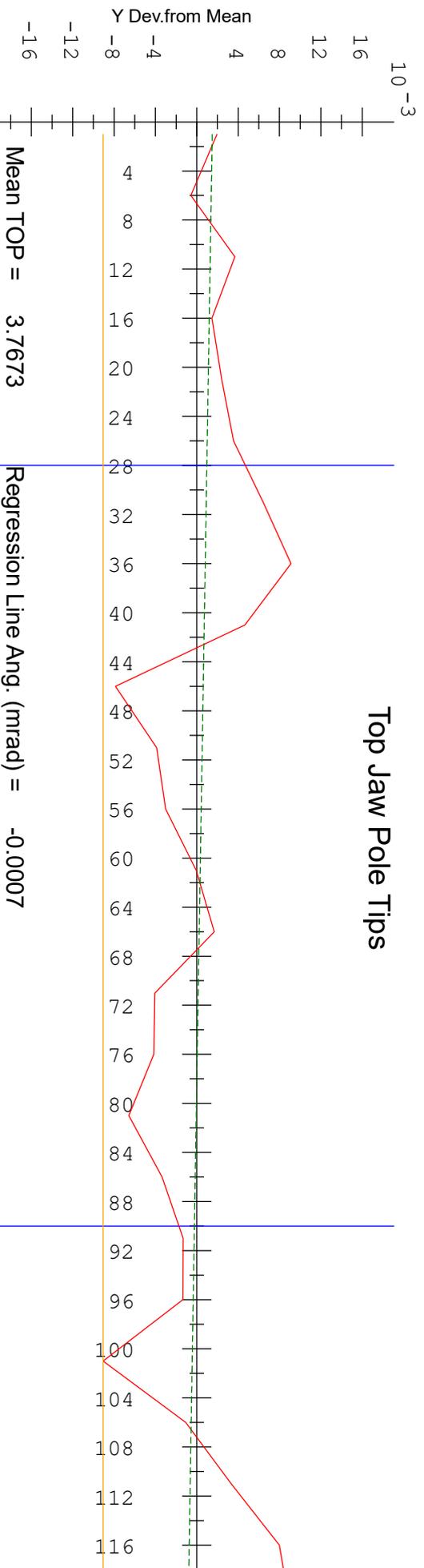


### Top Jaw Pole Tips



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

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



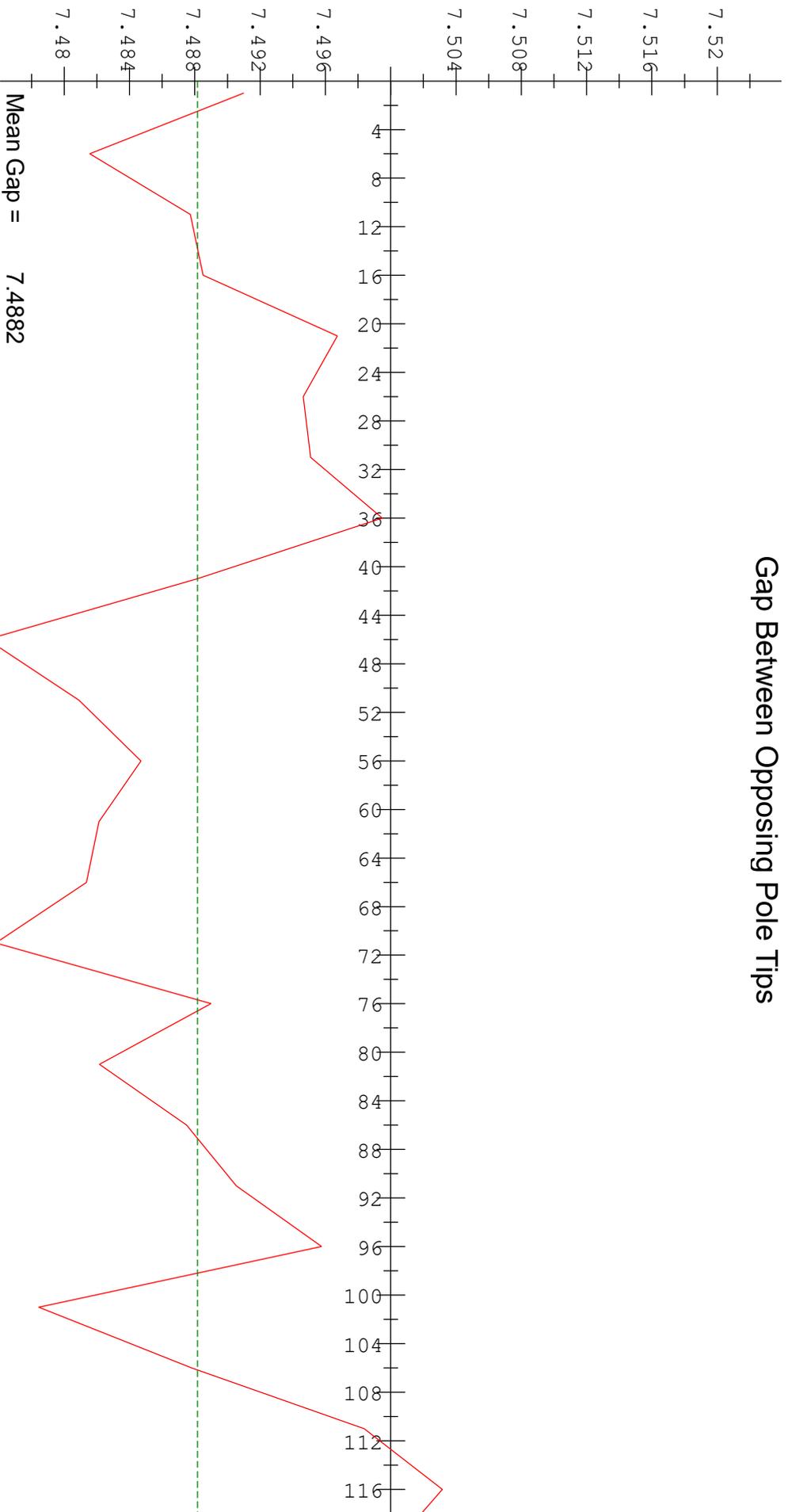
METROLOGY

## LCLS II-HE - SXR Undulator

Nominal Gap = 7.5  
 Nominal Taper = 0.000  
 Gap Reading = 7.4999  
 US Encoder = 7.4999  
 DS Encoder = 7.4999

15-OCT-2024  
 S/N = 027  
 D/S = 0001  
 Run = 4

# Gap Between Opposing Pole Tips



Step Between Measured Pole Tips = 5

Dimensions in mm



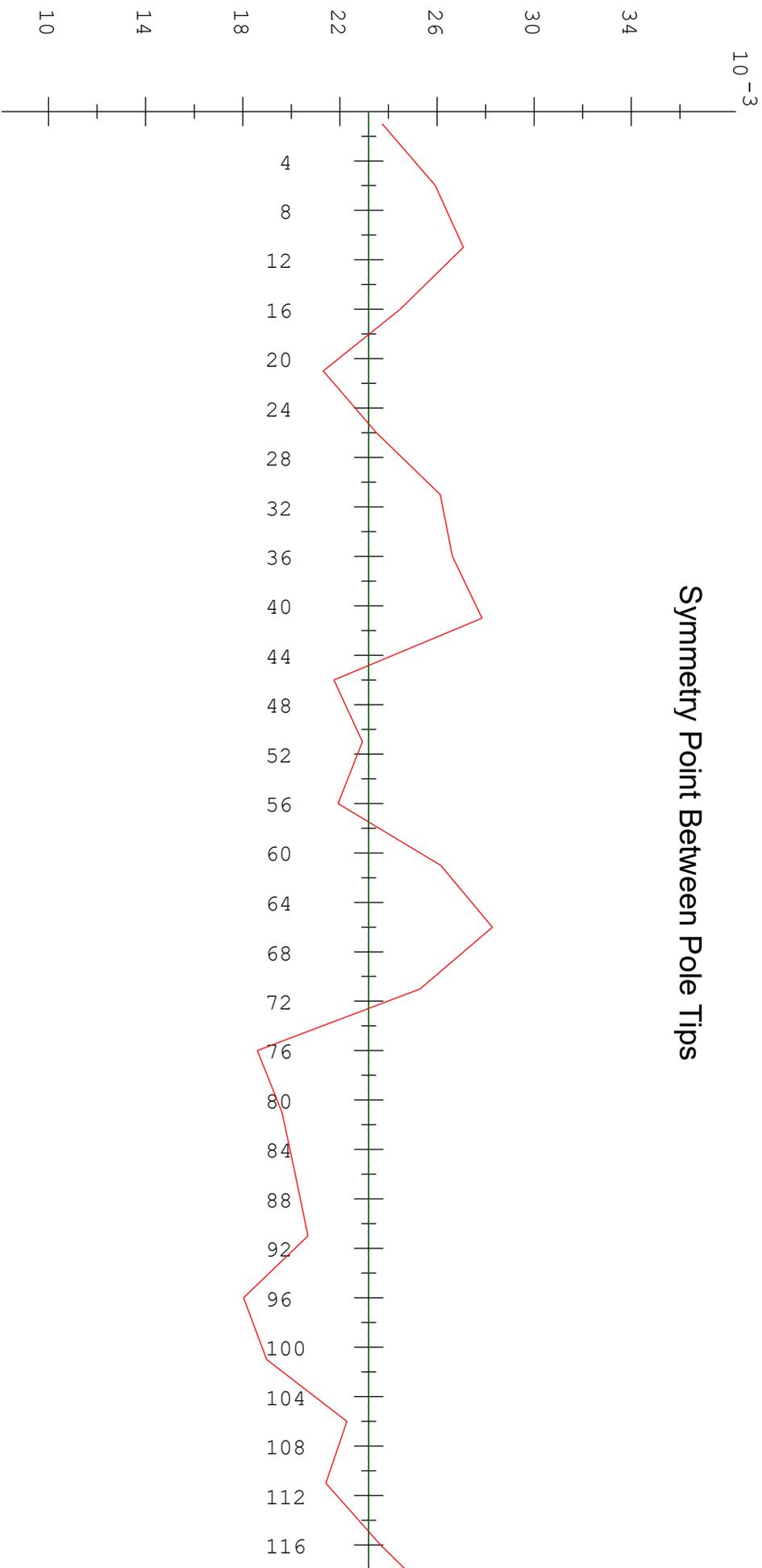
METROLOGY

## LCLS II-HE - SXR Undulator

Nominal Gap = 7.5  
Nominal Taper = 0.000  
Gap Reading = 7.4999  
US Encoder = 7.4999  
DS Encoder = 7.4999

15-OCT-2024  
S/N = 027  
D/S = 0001  
Run = 4

### Symmetry Point Between Pole Tips



Mean Symmetry Value = 0.0232

Step Between Measured Pole Tips = 5

Dimensions in mm



METROLOGY

## LCLS II-HE - SXR Undulator

Nominal Gap = 7.5      Nominal Taper = 0.000  
Gap Reading = 7.4999      US Encoder = 7.4999      DS Encoder = 7.4999

15-OCT-2024  
S/N = 027  
D/S = 0001  
Run = 4

## 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>    | 3.7688                         | 3.7682                          | 3.7670                          | 3.7665                         |
| <b>Bottom</b> | -3.7177                        | -3.7192                         | -3.7227                         | -3.7243                        |
| <b>Gap</b>    | 7.4865                         |                                 |                                 | 7.4908                         |
| <b>Taper</b>  |                                |                                 |                                 | 0.0043                         |

### Summary of Mean Values

| Top Jaw Poles | Btm. Jaw Poles | Gap Values | Sym. Pt. Values |
|---------------|----------------|------------|-----------------|
| 3.7673        | -3.7209        | 7.4882     | 0.0232          |

### Additional Calculated Values

|                               |                |
|-------------------------------|----------------|
| <b>Bottom Pole #1 Z Value</b> | <b>978.897</b> |
| <b>Top Jaw Pitch (mrad)</b>   | <b>-0.001</b>  |
| <b>Bottom Jaw Pitch(mrad)</b> | <b>-0.002</b>  |
| <b>Minimum Effective Gap</b>  | <b>7.471</b>   |
| <b>Reference Block Gap</b>    | <b>6.801</b>   |

Dimensions in mm



METROLOGY

## LCLS II-HE - SXR Undulator

Nominal Gap = 7.5      Nominal Taper = 0.000  
 Gap Reading = 7.4999      US Encoder = 7.4999      DS Encoder = 7.4999

15-OCT-2024  
 S/N = 027  
 D/S = 0001  
 Run = 4