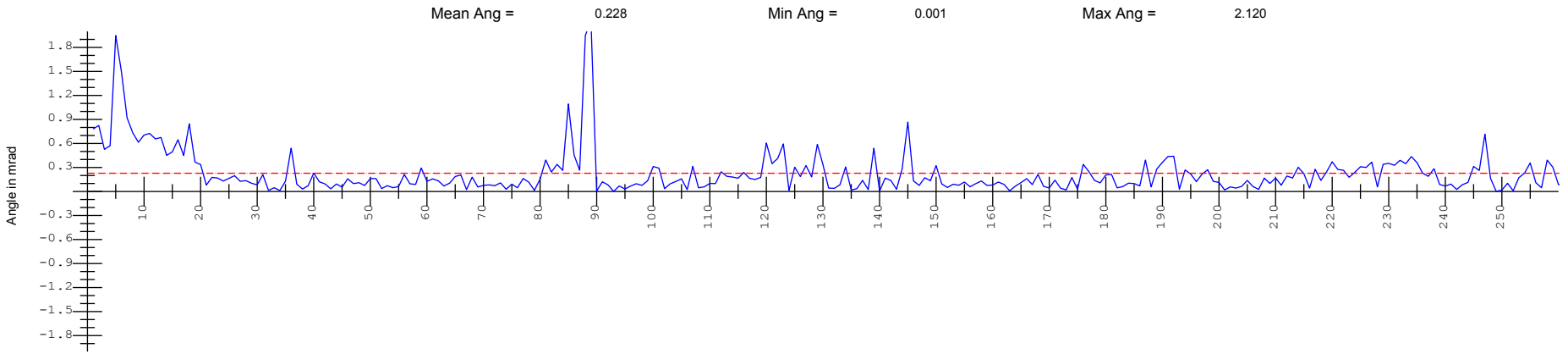
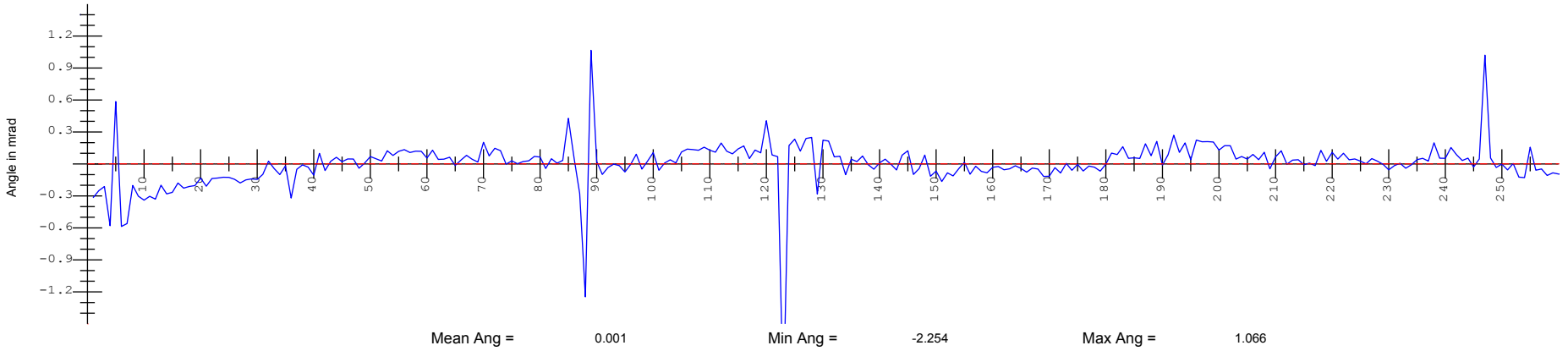



## Included Angle Between Pole Tips

Pole Tip Num. ---------->

## Angle of Symmetry Line between Pole Tips to Tuning Gap ZX Plane




Dimensions in MM, Angles in Milliradians

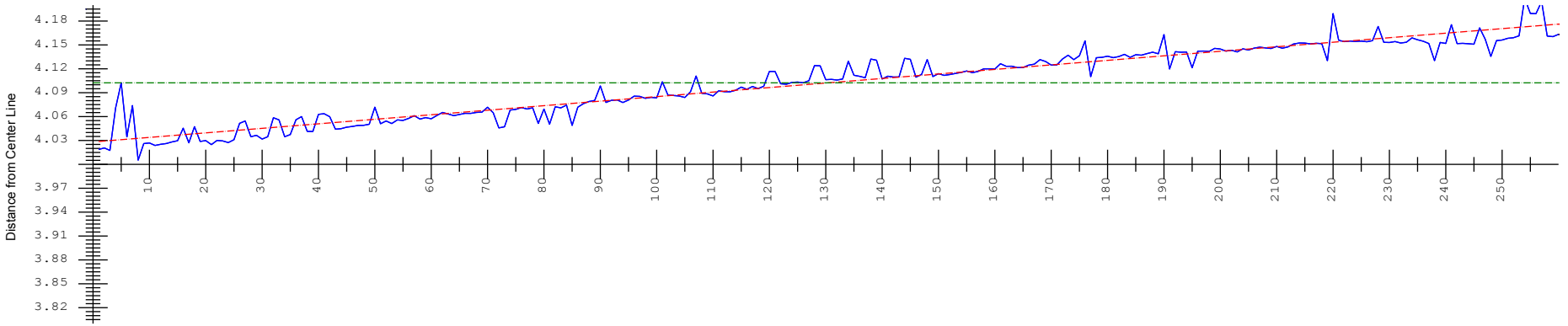
SLAC NATIONAL ACCELERATOR LABORATORY
METROLOGY

# HGVPU - Pole Tip Angles

| | | | | | |
|---|---|---|---|---|---|
| | | US Full : | 8.0002 | DS Full : | 8.3000 |
| Nominal Gap : | 8.000 | US Wall Half : | 4.0022 | DS Wall Half : | 4.1515 |
| Nom. Taper : | 0.300 | US Aisle Half : | 4.0025 | DS Aisle Half : | 4.1499 |

| | |
|---|---|
| S/N | : HXU_004 |
| Date | : 16-JUL-2019 |
| Data Set | : 0001 |
| Run | : FINAL |
| Cam Pos. | : B |

Aisle Pole Mean= 4.102 Aisle Pole Min. = 4.005 Aisle Pole Max. = 4.209 Reg. Line Ang. = 0.044




## Aisle Pole Tips at Nom. Beam Height

Blue = Pole Tip points

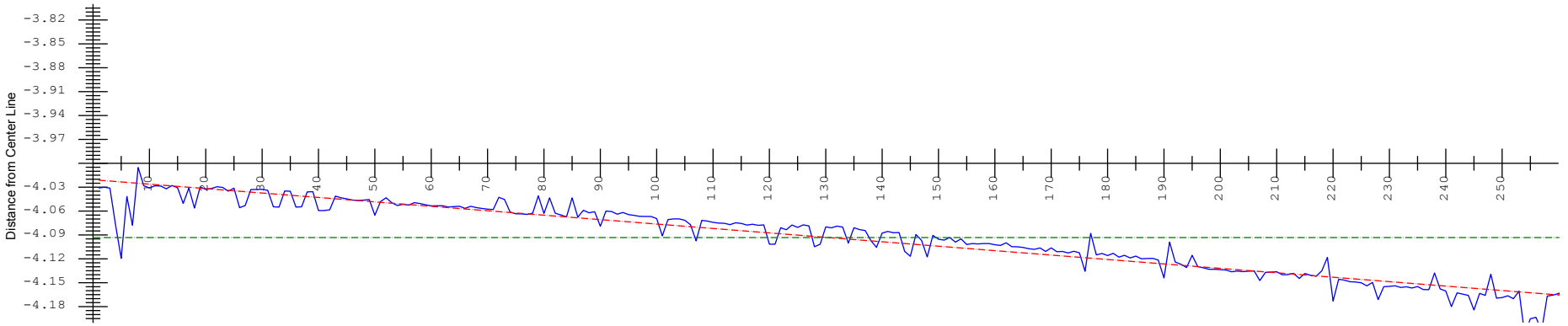
Green = Mean line

Red = Regression line thru points

Pole Tip Num. ---------->

## Wall Pole Tips at Nom. Beam Height

Minimum Clearance Gap = 8.011




Wall Pole Mean = -4.093 Wall Pole Min. = -4.215 Wall Pole Max. = -4.005 Reg. Line Ang. = -0.043

**Girder centerline in reference to Pointed Magnets**

Dimensions in MM, Angles in Milliradians

SLAC NATIONAL ACCELERATOR LABORATORY
METROLOGY

# HGVPU -

**Pole Tip Location from Girder Centerline**

| | | | | | |
|---|---|---|---|---|---|
| | | US Full : | 8.0002 | DS Full : | 8.3000 |
| Nominal Gap : | 8.000 | US Wall Half : | 4.0022 | DS Wall Half : | 4.1515 |
| Nom. Taper : | 0.300 | US Aisle Half : | 4.0025 | DS Aisle Half : | 4.1499 |

| | |
|---|---|
| S/N | : HXU_004 |
| Date | : 16-JUL-2019 |
| Data Set | : 0001 |
| Run | : FINAL |
| Cam Pos. | : B |

## Values Calculated from Regression Line End Points

| Dimension | X Value | Y Value | Z Value | Calc. Value |
|---|---|---|---|---|
| US Aisle Pole Tip(1) | 4.029 | 0.000 | 8.750 | |
| US Wall Pole Tip(1) | -4.021 | 0.000 | 8.750 | |
| US Sym. Pt. | 0.004 | | | |
| US Gap | | | | 8.050 |
| DS Aisle Pole Tip(260) | 4.176 | 0.000 | 3375.750 | |
| DS Wall Pole Tip(260) | -4.165 | 0.000 | 3375.750 | |
| DS Sym. Pt. | 0.005 | | | |
| DS Gap | | | | 8.341 |
| Taper | | | | 0.292 |

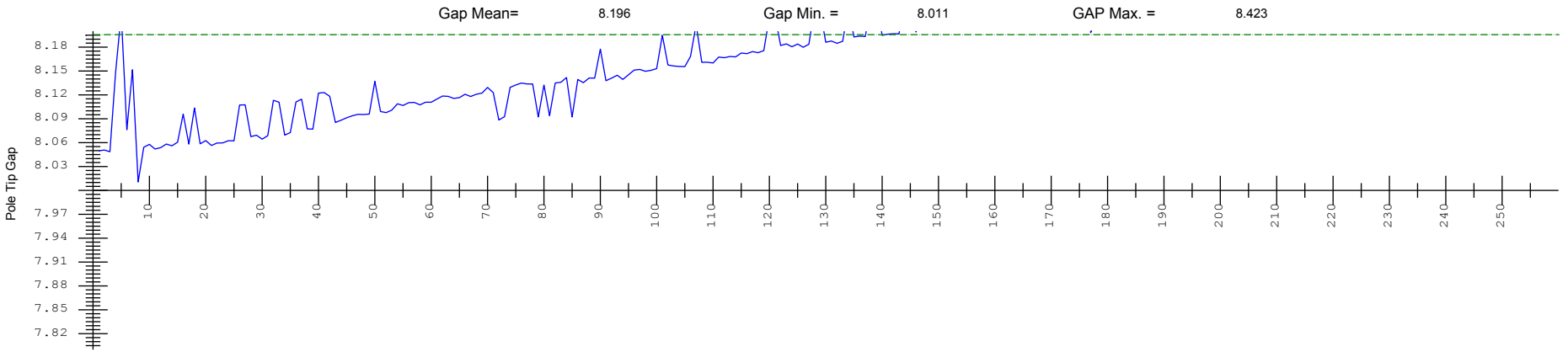
Dimensions in MM

SLAC NATIONAL ACCELERATOR LABORATORY
METROLOGY

**HGVPU -** Gap Calc. from Regression Line End Points

| | | | | | |
|---|---|---|---|---|---|
| | | US Full : | 8.0002 | DS Full : | 8.3000 |
| Nominal Gap : | 8.000 | US Wall Half : | 4.0022 | DS Wall Half : | 4.1515 |
| Nom. Taper : | 0.300 | US Aisle Half : | 4.0025 | DS Aisle Half : | 4.1499 |

| | |
|---|---|
| S/N | : HXU_004 |
| Date | : 16-JUL-2019 |
| Data Set | : 0001 |
| Run | : FINAL |
| Cam Pos. | : B |




## Pole Tip Gap at Nom. Beam Height

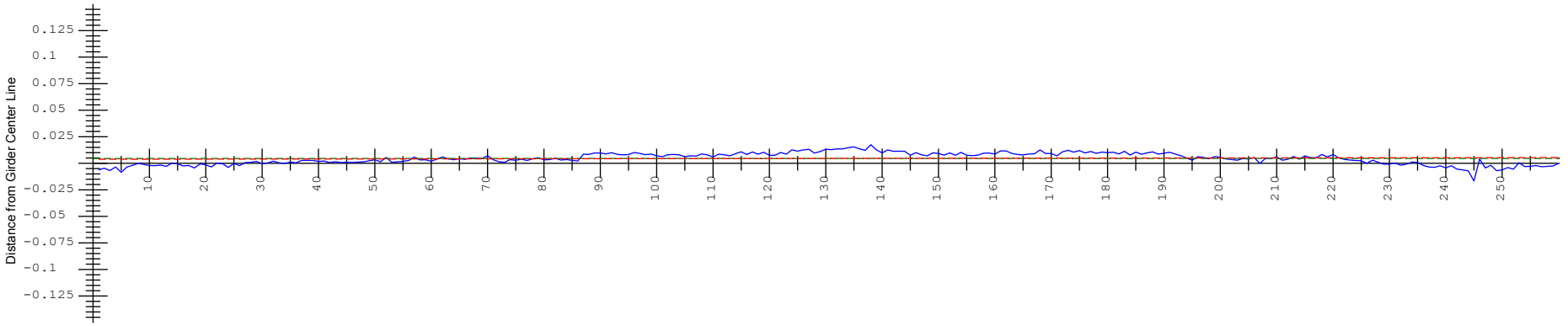
Blue = Pole Tip points

Green = Mean line

Red = Regression line thru points

Pole Tip Num. ---------->

## Pole Tip Symmetery Point at Nom. Beam Height




Sym. Mean = 0.005 Sym. Min. = -0.017 Sym. Max. = 0.018 Reg. Line Ang. = 0.000

**Girder centerline in reference to Pointed Magnets**

Dimensions in MM, Angles in Milliradians

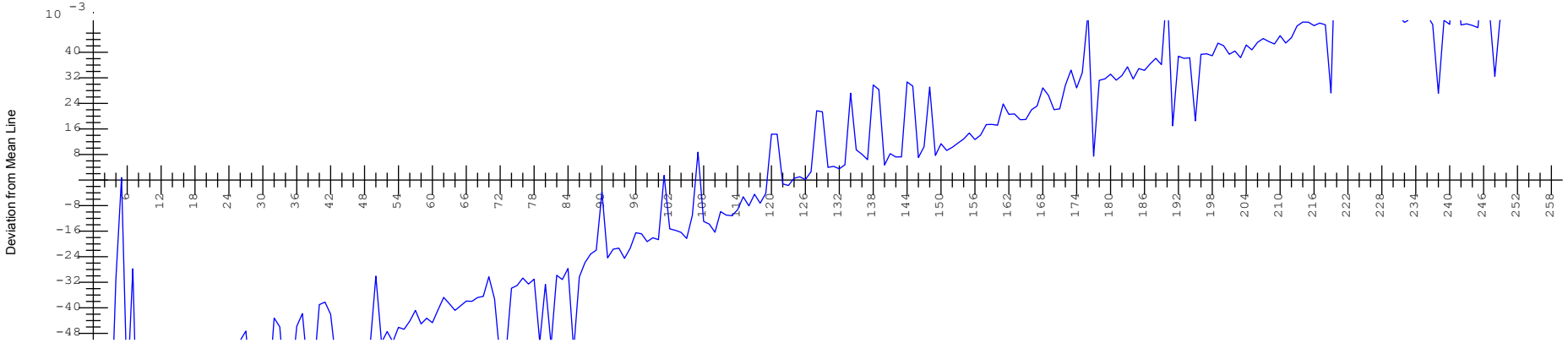
SLAC NATIONAL ACCELERATOR LABORATORY
METROLOGY

# HGVPU -

**Pole Tip Gap and Symmetry Point Location**

| | | | | | |
|---|---|---|---|---|---|
| | | US Full : | 8.0002 | DS Full : | 8.3000 |
| Nominal Gap : | 8.000 | US Wall Half : | 4.0022 | DS Wall Half : | 4.1515 |
| Nom. Taper : | 0.300 | US Aisle Half : | 4.0025 | DS Aisle Half : | 4.1499 |

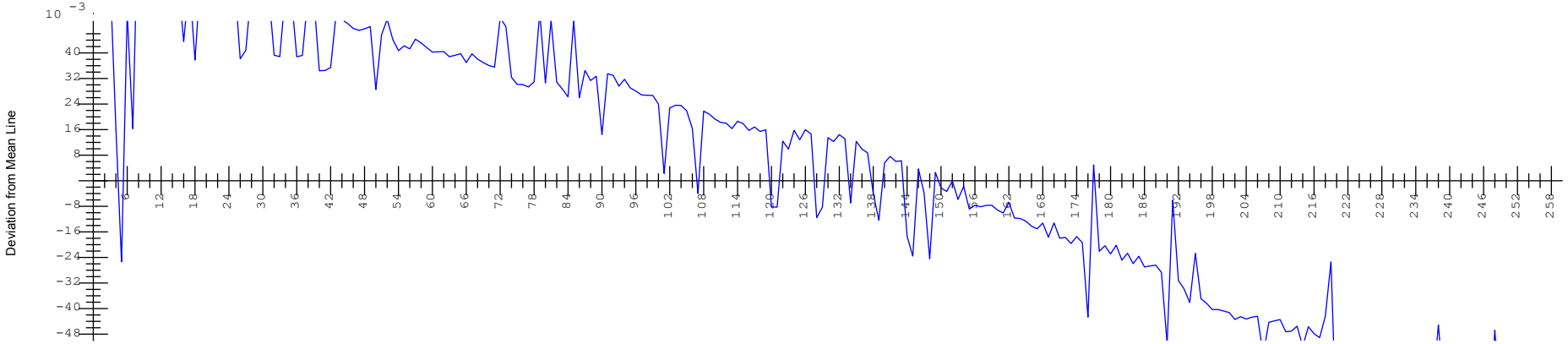
| | |
|---|---|
| S/N | : HXU_004 |
| Date | : 16-JUL-2019 |
| Data Set | : 0001 |
| Run | : FINAL |
| Cam Pos. | : B |




## Aisle Pole Tips

Pole Tip Num. ---------->

## Wall Pole Tips




**Pole Tip Deviations from Jaw Mean Lines when aligned to actual Gap Sym. Plane**

Dimensions in MM

SLAC NATIONAL ACCELERATOR LABORATORY
METROLOGY

# HGVPU -

**Pole Tip Deviation from Mean Line**

| | | | | | |
|---|---|---|---|---|---|
| | | US Full : | 8.0002 | DS Full : | 8.3000 |
| Nominal Gap : | 8.000 | US Wall Half : | 4.0022 | DS Wall Half : | 4.1515 |
| Nom. Taper : | 0.300 | US Aisle Half : | 4.0025 | DS Aisle Half : | 4.1499 |

| | |
|---|---|
| S/N | : HXU_004 |
| Date | : 16-JUL-2019 |
| Data Set | : 0001 |
| Run | : FINAL |
| Cam Pos. | : B |