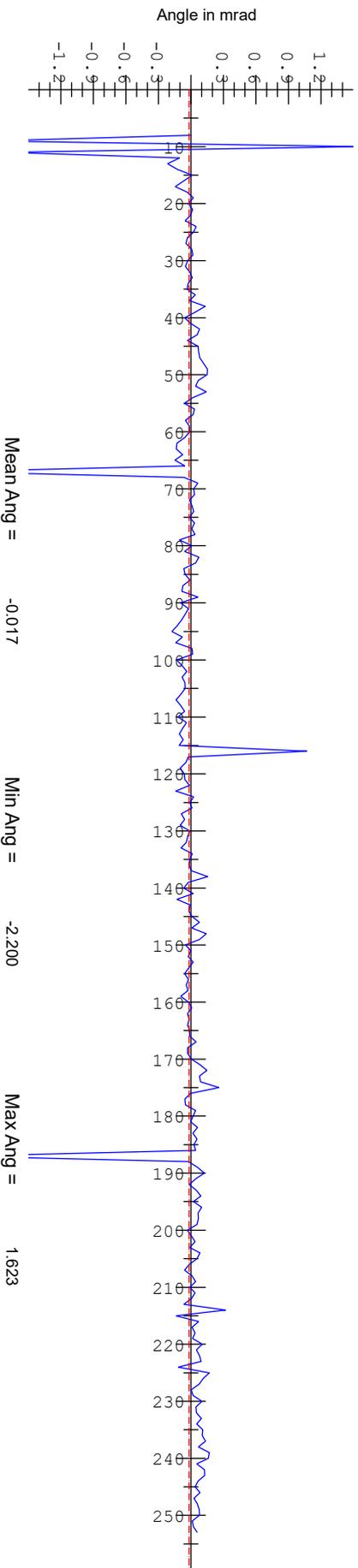


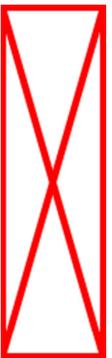
### Included Angle Between Pole Tips

Pole Tip Num. ----->

### Angle of Symmetry Line between Pole Tips to Grider ZX Plane



Dimensions in MM, Angles in Milliradians

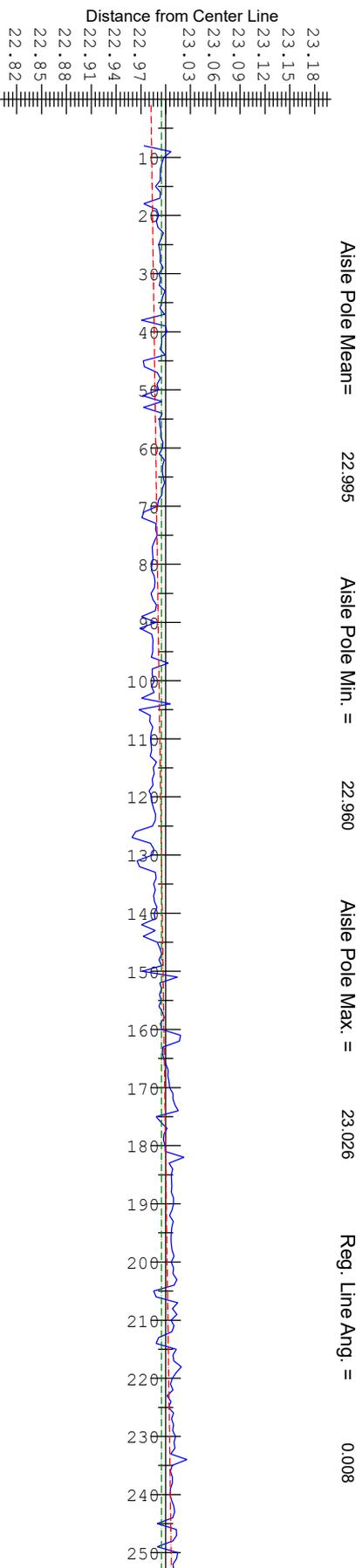


METROLOGY

## HGVPU - Pole Tip Angles with Vacuum Chamber

Nominal Gap :	46.000	US Full :	46.000	DS Full :	46.0001
US Wall Half :	22.9975	US Wall Half :	22.9975	DS Wall Half :	22.9893
DS Wall Half :	22.9893	US Aisle Half :	22.9977	DS Aisle Half :	22.9899
Nom. Taper :	0.000				

S/N	: HXU_011
Date	: 30-SEP-2021
Data Set	: 0004
Run	: RUN 2
Cam Pos.	: B



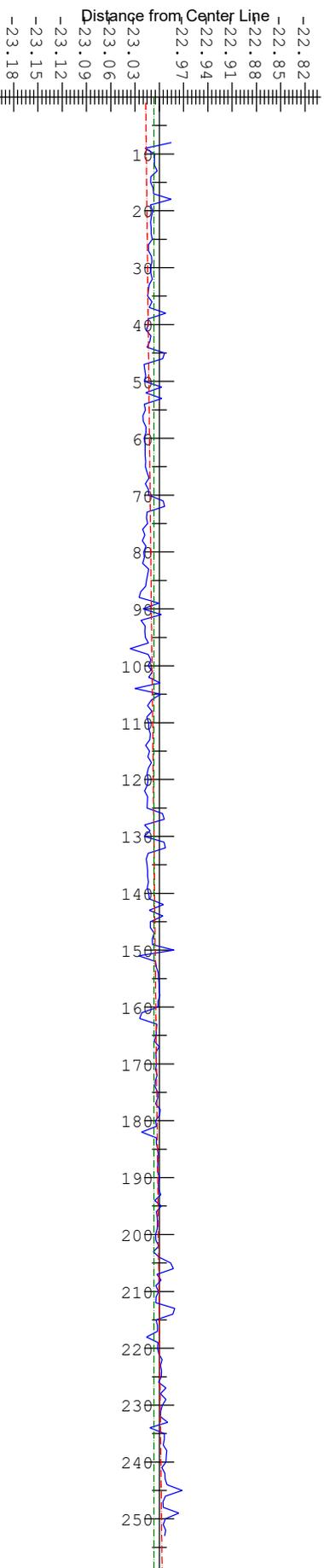
### Aisle Pole Tips at Nom. Beam Height

Pole Tip Num. ----->

Blue = Pole Tip points  
Green = Mean line  
Red = Regression line thru points

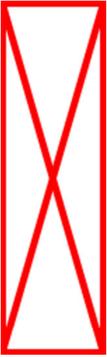
### Wall Pole Tips at Nom. Beam Height

Minimum Clearance Gap = 45.919



### Girder centerline in reference to Pointed Magnets

Dimensions in MM, Angles in Milliradians



HGVPU - Pole Tip Location with Vacuum Chamber

Nominal Gap :	46.000	US Full :	46.000	DS Full :	46.0001
US Wall Half :	22.9975	DS Wall Half :	22.9893	DS Aisle Half :	22.9899
Nom. Taper :	0.000	US Aisle Half :	22.9977	DS Aisle Half :	22.9899

S/N	: HXU 011
Date	: 30-SEP-2021
Data Set	: 0004
Run	: RUN 2
Cam Pos.	: B

METROLOGY

**Values Calculated from Regression Line End Points**

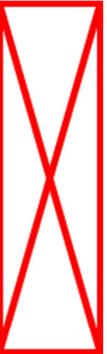
Dimension	X Value	Y Value	Z Value	Calc. Value
US Aisle Pole Tip(1)	22.982	0.000	8.750	
US Wall Pole Tip(1)	-23.017	0.000	8.750	
US Sym. Pt.	-1.575			
US Gap				45.999
DS Aisle Pole Tip(260)	23.008	0.000	3375.750	
DS Wall Pole Tip(260)	-22.997	0.000	3375.750	
DS Sym. Pt.	2.258			
DS Gap				46.004
Taper				0.005

Dimensions in MM

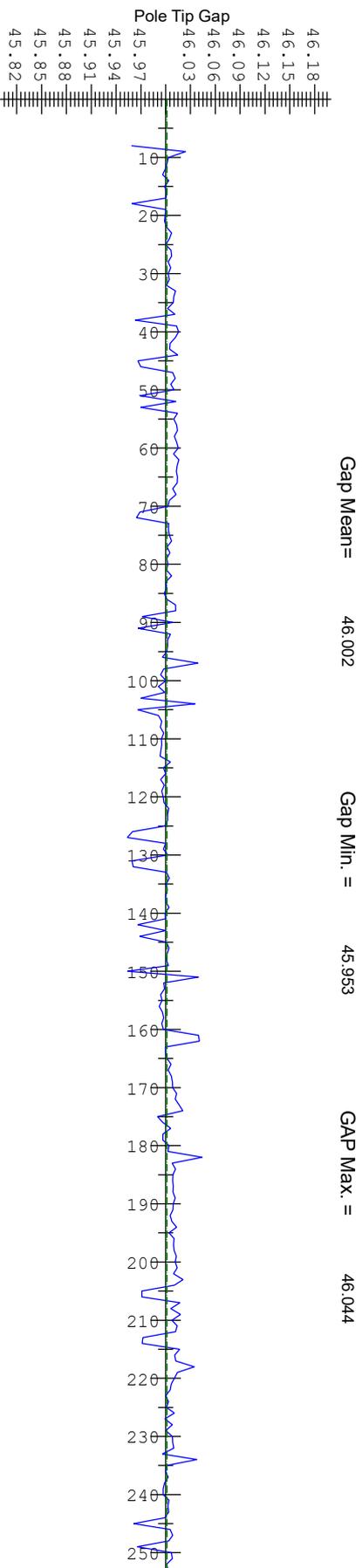
# HGVPU - Gap Calc. with Vacuum Chamber

**Nominal Gap :** 46.000    **US Full :** 46.000    **DS Full :** 46.0001  
**US Wall Half :** 22.9975    **DS Wall Half :** 22.9893  
**Norm. Taper :** 0.000    **US Aisle Half :** 22.9977    **DS Aisle Half :** 22.9899

**S/N :** HXU\_011  
**Date :** 30-SEP-2021  
**Data Set :** 0004  
**Run :** RUN 2  
**Cam Pos. :** B



METROLOGY

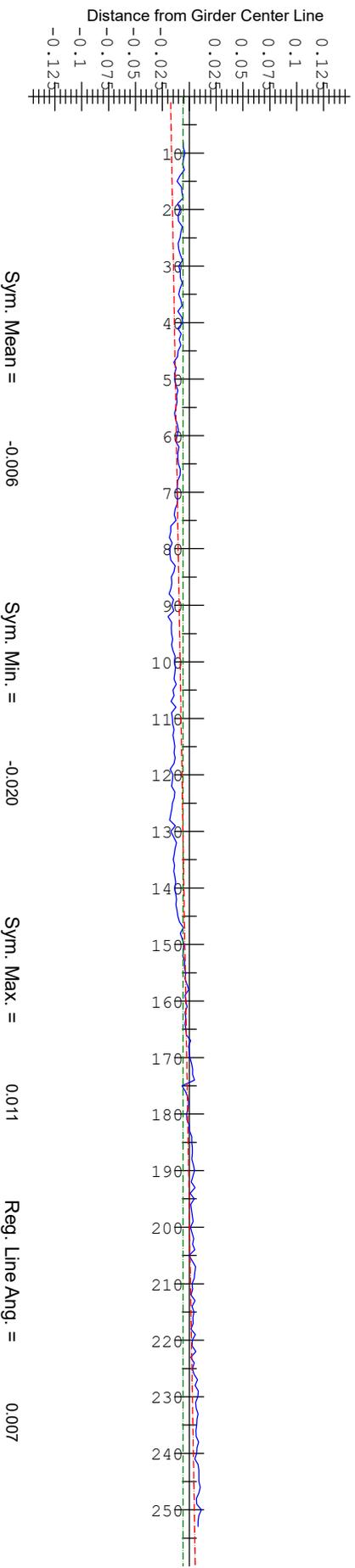


### Pole Tip Gap at Nom. Beam Height

Pole Tip Num. ----->

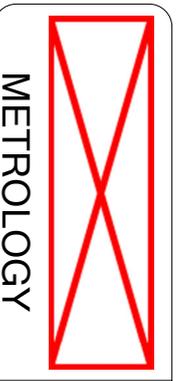
Blue = Pole Tip points  
 Green = Mean line  
 Red = Regression line thru points

### Pole Tip Symmetry Point at Nom. Beam Height



### Girder centerline in reference to Pointed Magnets

Dimensions in MM, Angles in Milliradians

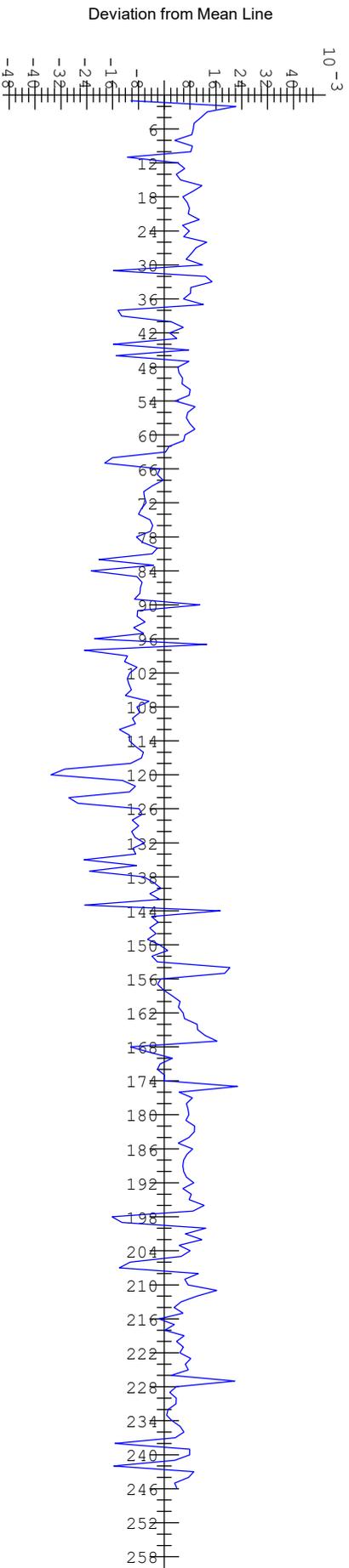


## HGVPU - Gap and Symmetry Point with Vacuum Chamber

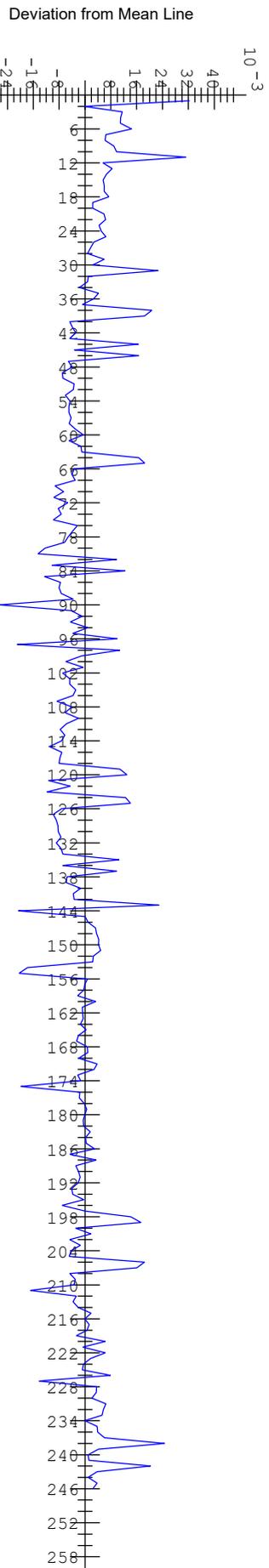
Nominal Gap :	46.000	US Full :	46.000	DS Full :	46.0001
US Wall Half :	22.9975	US Aisle Half :	22.9977	DS Wall Half :	22.9893
DS Aisle Half :	22.9899				

S/N	: HXU_011
Date	: 30-SEP-2021
Data Set	: 0004
Run	: RUN 2
Cam Pos.	: B

METROLOGY



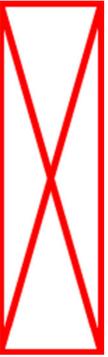
### Aisle Pole Tips



### Wall Pole Tips

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

Dimensions in MM



METROLOGY

# HGVPU - Pole Tip Deviation from Mean Line

Nominal Gap :	46.000	US Full :	46.000	DS Full :	46.0001
Nom. Taper :	0.000	US Wall Half :	22.9975	DS Wall Half :	22.9893
		US Aisle Half :	22.9977	DS Aisle Half :	22.9899

S/N	: HXU_011
Date	: 30-SEP-2021
Data Set	: 0004
Run	: RUN 2
Cam Pos.	: B