Included Angle Between Tips

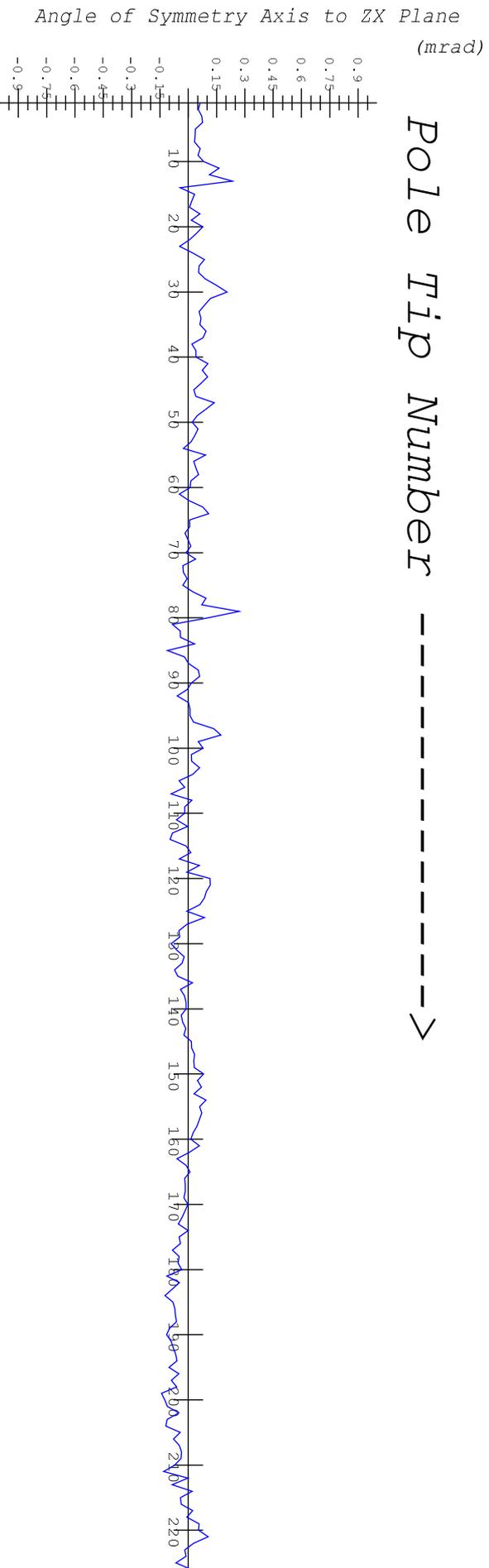Angle of Symmetry Axis to ZX Plane

(mrad)

Pole Tip Number ------------->

Symmetry Axis is the symmetry axis between the Upper and Lower Pole Tips
Included Angle is the angle between the Upper and Lower Pole Tips

Undulator Pole Tip Angles
TWIST TEST, WITH FLAT FEET

Pole Tip Number ----------->

X

SLAC
LCLS-MMF
LEITZ CMM

Undulator Pole Tip Location
TWIST TEST, WITH FLAT FEET

DATE:09-OCT-2007
UNDULATOR # 24
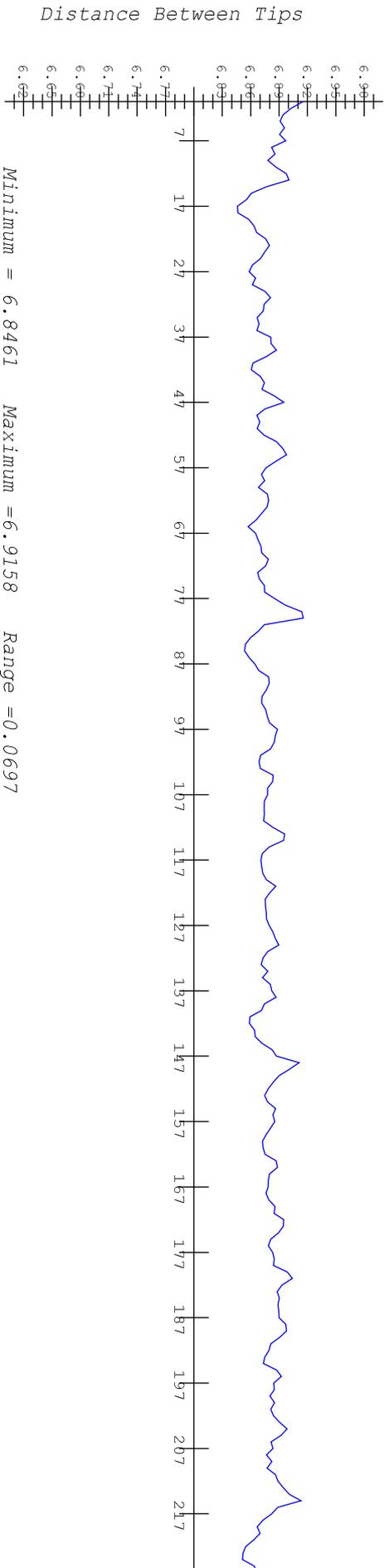DATASET # 0001
PROGRAM VERSION 2.3
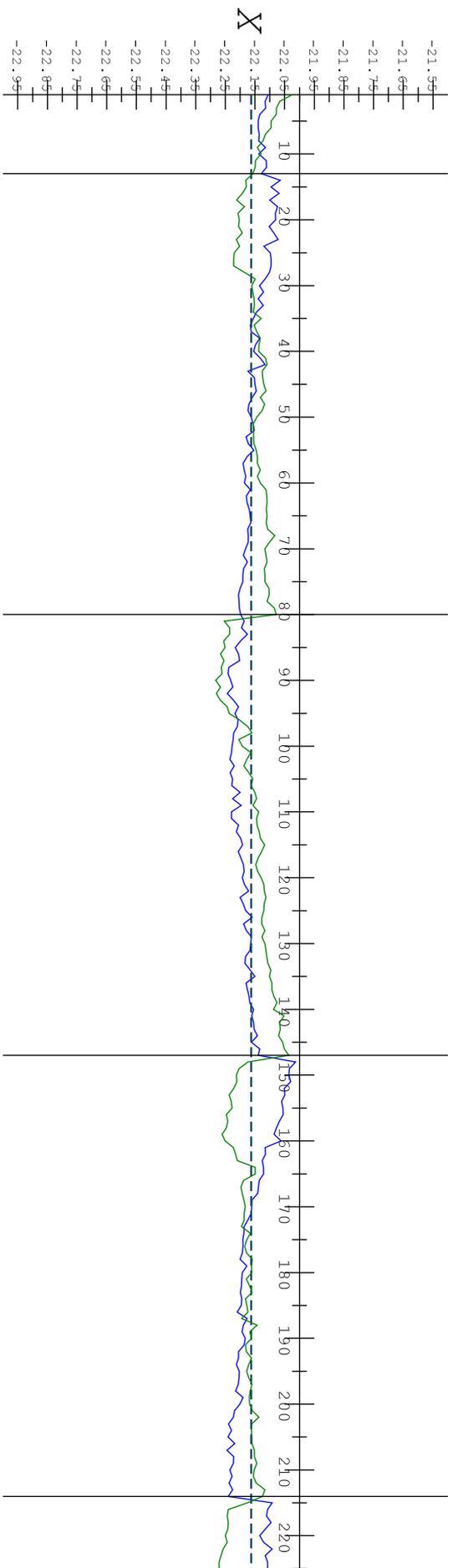
X values in mm
Green Solid = Point on front face of Upper Pole Tip 10mm above Magnetic C/L
Green Dash = Mean value of all Upper Pole Tips 10mm above Magnetic C/L   Mean value Upper Pole Tips = -22.161
Blue Solid = Point on front face of Lower Pole Tip 10mm below Magnetic C/L
Blue Dash = Mean value of all Lower Pole Tips 10mm below Magnetic C/L   Mean value Lower Pole Tips = -22.164
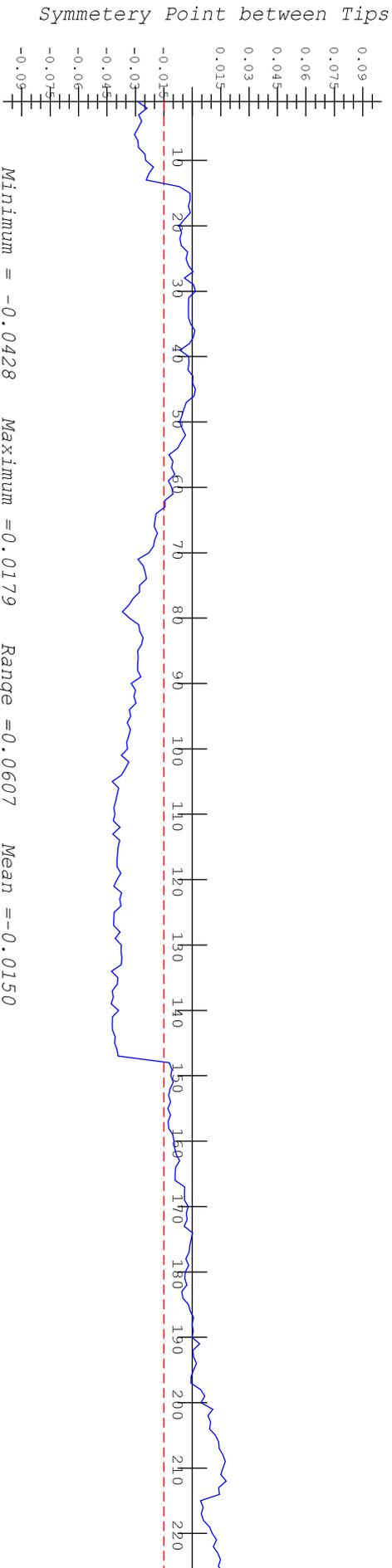
Distance Between Tips

Minimum = 6.8461   Maximum =6.9158   Range =0.0697

Symmetery Point between Tips

in mm
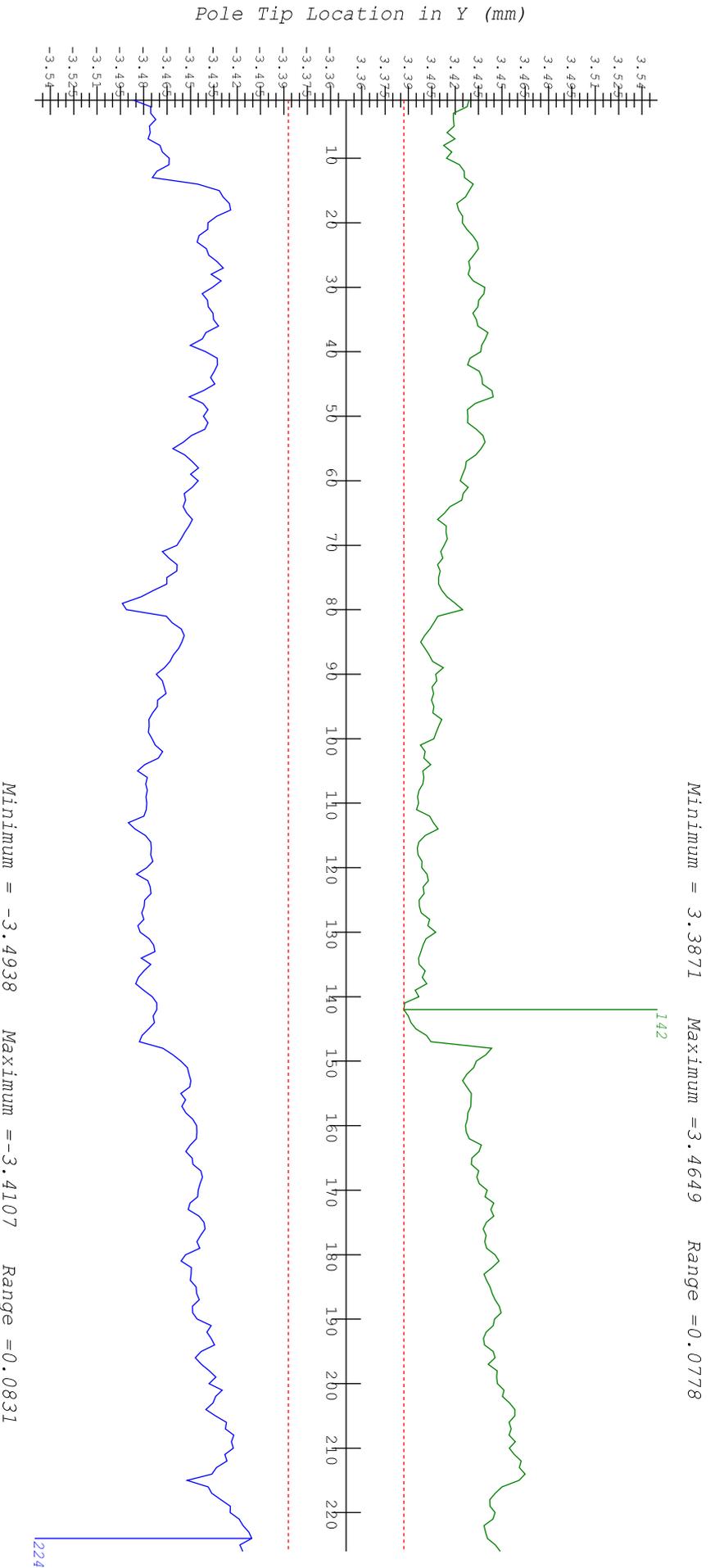
Pole Tip Number ----------->

Symmetry Point is the symmetry point between the Upper and Lower Pole Tips were they intersect a YZ plane at the Magnetic C\L

Broken Red line is Mean Value of Symmetry Points

Distance Between Tips is the distance between the Upper and Lower Pole Tips were they intersect a YZ plane at the Magnetic C\L

Minimum = -0.0428   Maximum =0.0179   Range =0.0607   Mean =-0.0150

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Undulator Pole Tip Location
TWIST TEST, WITH FLAT FEET

DATE:09-OCT-2007
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DATASET   # 0001
PROGRAM VERSION 2.3

Maximum Chamber Gap = 6.7742

Pole Tip Location in Y (mm)

Minimum = 3.3871   Maximum = 3.4649   Range = 0.0778

Minimum = -3.4938   Maximum = -3.4107   Range = 0.0831

Pole Tip Number ------------>

Undulator Pole Tip Location
TWIST TEST, WITH FLAT FEET

Green = The position of the Upper Pole Tips at Magnetic C\L
Blue = The position of the Lower Pole Tips at Magnetic C\L
Max. Chamber Gap = The maximum width vacuum chamber that will fit centered on the Magentic C\L (2*Min. Dev. from C\L)

SLAC
LCLS-MMF
LEITZ CMM

DATE:09-OCT-2007
UNDUIATOR # 24
DATASET   # 0001
PROGRAM VERSION 2.3

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LEITZ CMM

Undulator Dimensional Fiducialization
TWIST TEST, WITH FLAT FEET

DATE: 09-OCT-2007
UNDULATOR # 24
DATASET # 0001
PROGRAM VERSION 2.3

DOWNSTREAM

UPSTREAM

Z

Y

Top Magnetic Structure
Bottom Magnetic Structure
Strongback
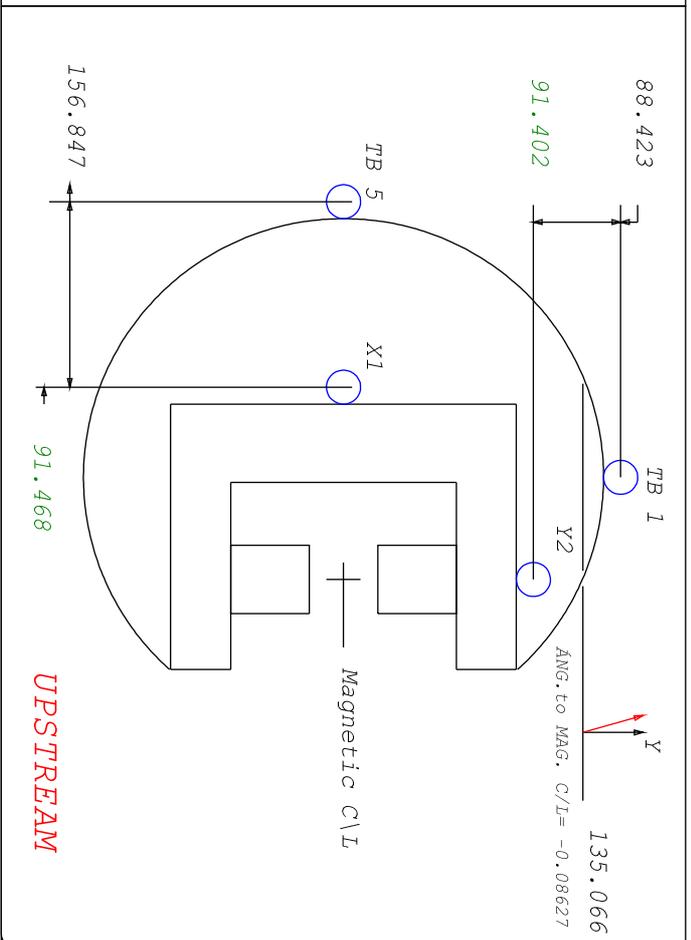
	C\L Offset	Length
Top Magnetic Structure	-0.005	3380.785
Bottom Magnetic Structure	0.005	3380.863
Strongback	0.430	3399.876

Dimensions in mm

Angles in mrad

TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	0.0131	179.8250	-1558.172
2	0.2102	179.7767	-584.5946
3	0.1519	179.7883	591.3706
4	0.1191	179.9013	1562.1764
5	0.3145	0.1418	-1558.190
6	0.4668	0.0595	-584.5460
7	0.3342	0.1922	591.4015
8	0.3341	0.2207	1562.2916

DOWNSTREAM

135.087

ANG.to MAG. C/L= 0.32025

Magnetic C\L

Y1

TB 4

X1

TB 8

91.360

88.562

91.339

156.974

UPSTREAM

TB 5

X1

TB 1

Y2

Magnetic C\L

ANG.to MAG. C/L= -0.08627

135.066

156.847

91.468

88.423

91.402