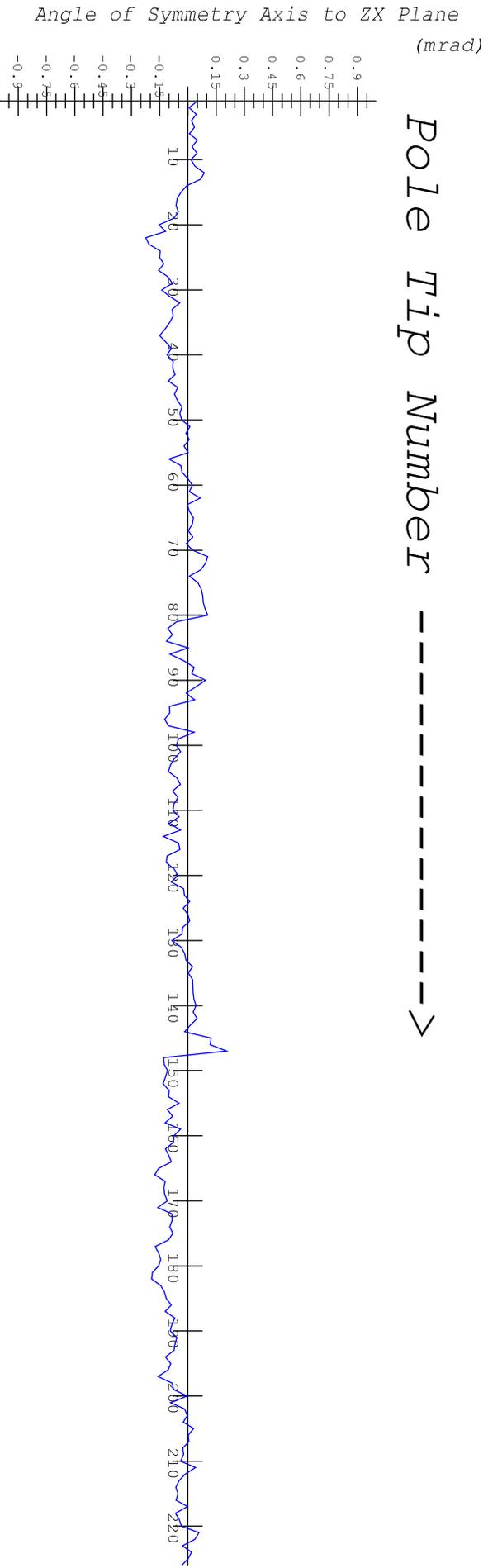


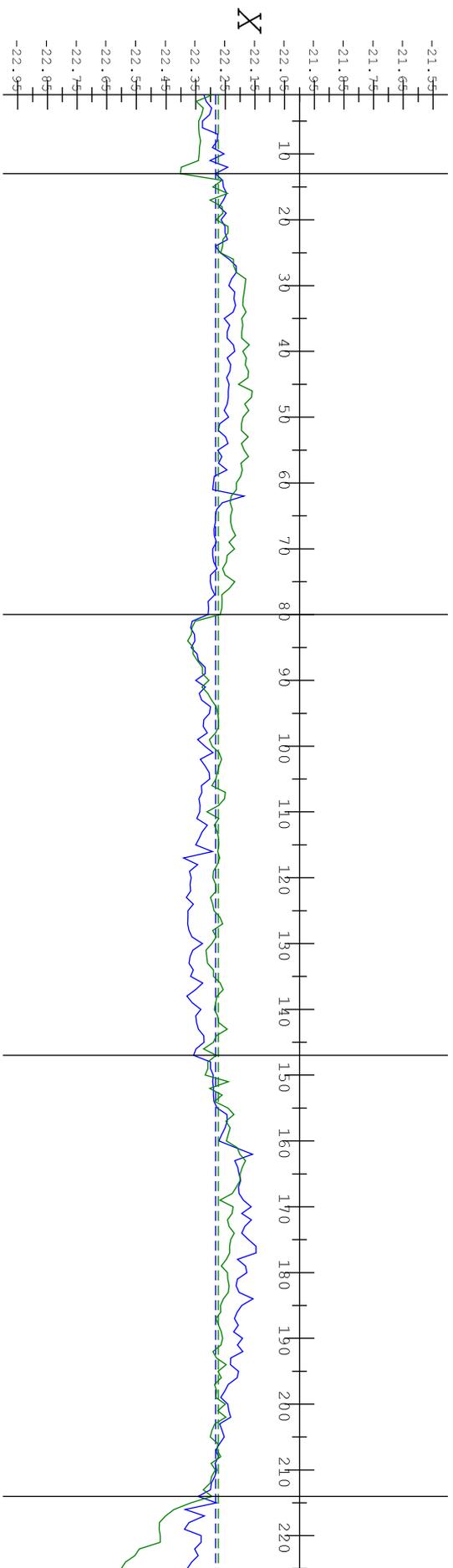
Pole Tip Number ----->



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

<p><b>SLAC</b>          LCLS-MMF          LEITZ CMM</p>	<p>Undulator Pole Tip Angles          Post Magnetic Alignment</p>	<p>DATE: 13-JUN-2007          UNDUULATOR # 13          DATASET # 0001          PROGRAM VERSION 1.8</p>
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# Pole Tip Number ----->

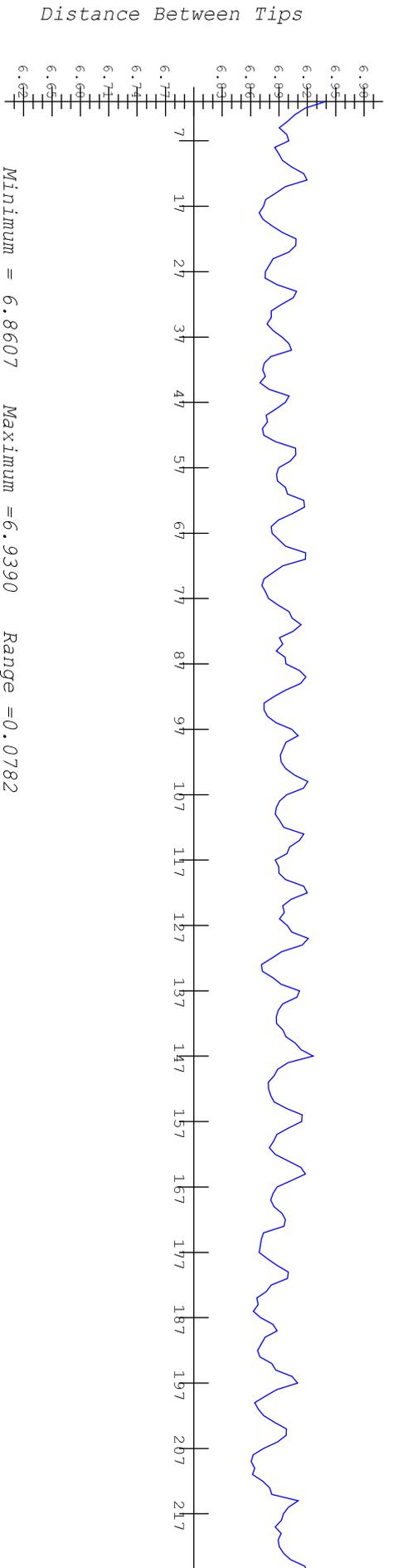


X values in mm  
 Green Solid = Point on front face of Upper Pole Tip 10mm above Magnetic C/L  
 Green Dash = Mean value of all Upper Pole Tips 10mm above Magnetic C/L Mean value Upper Pole Tips = -22.274  
 Blue Solid = Point on front face of Lower Pole Tip 10mm below Magnetic C/L  
 Blue Dash = Mean value of all Lower Pole Tips 10mm below Magnetic C/L Mean value Lower Pole Tips = -22.283

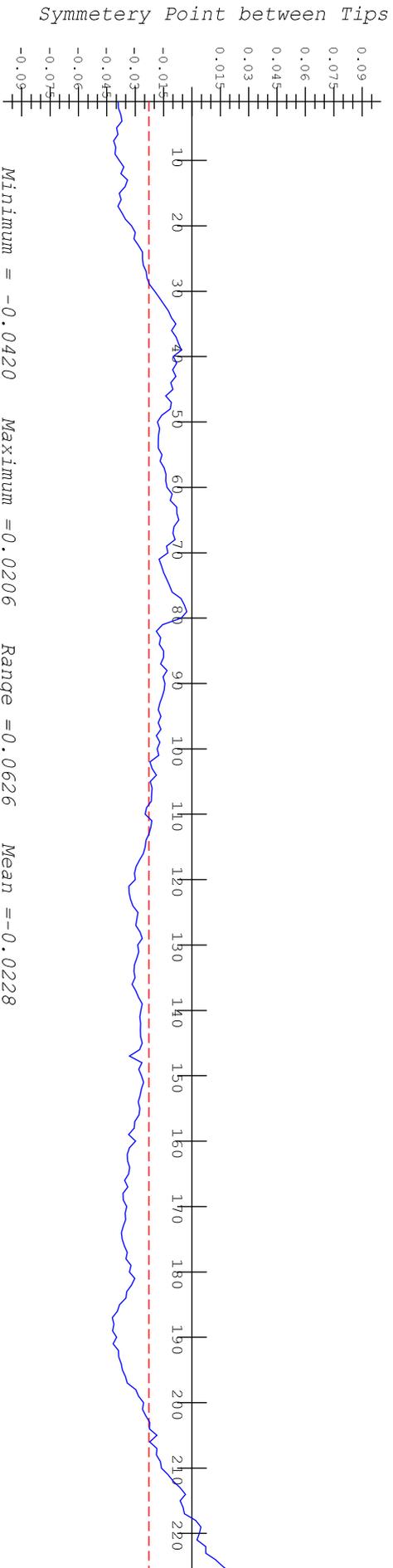
**SLAC**  
 LCLS-MMF  
 LEITZ CMM

Undulator Pole Tip Location  
 Post Magnetic Alignment

DATE: 13-JUN-2007  
 UNDUULATOR # 13  
 DATASET # 0001  
 PROGRAM VERSION 1.8



# 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

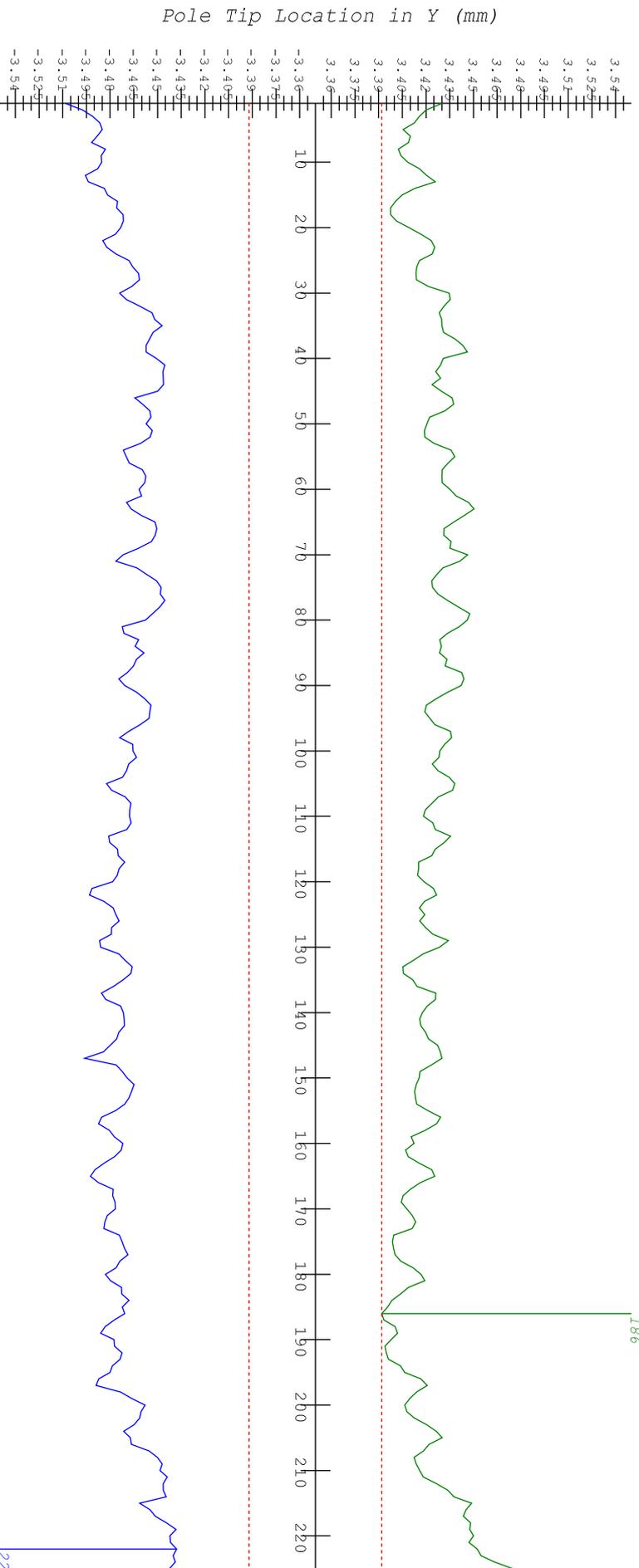
**SLAC**  
 LCLS-MMF  
 LEITZ CMM

Undulator Pole Tip Location  
 Post Magnetic Alignment

DATE: 13-JUN-2007  
 UNDUULATOR # 13  
 DATASET # 0001  
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Maximum Chamber Gap = 6.7840

Minimum = 3.3920    Maximum = 3.4808    Range = 0.0888



Minimum = -3.5085    Maximum = -3.4378    Range = 0.0707

Pole Tip Number ----->

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 Magnetic C\L (2\*Min. Dev. from C\L)

**SLAC**  
LCLS-MMF  
LEITZ CMM

Undulator Pole Tip Location  
Post Magnetic Alignment

DATE: 13-JUN-2007  
UNDULATOR # 13  
DATASET # 0001  
PROGRAM VERSION 1.8



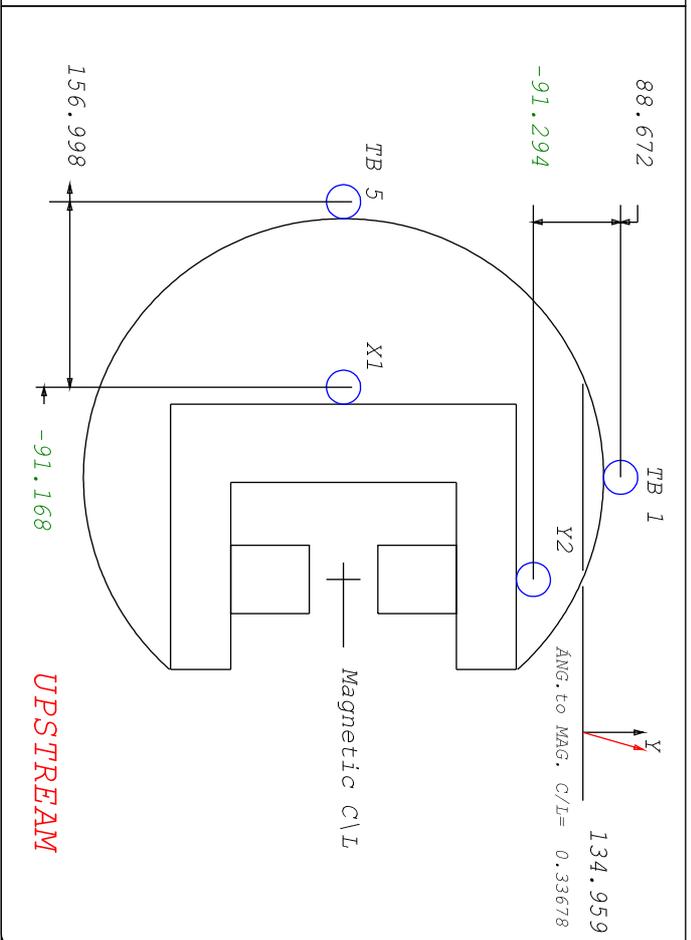
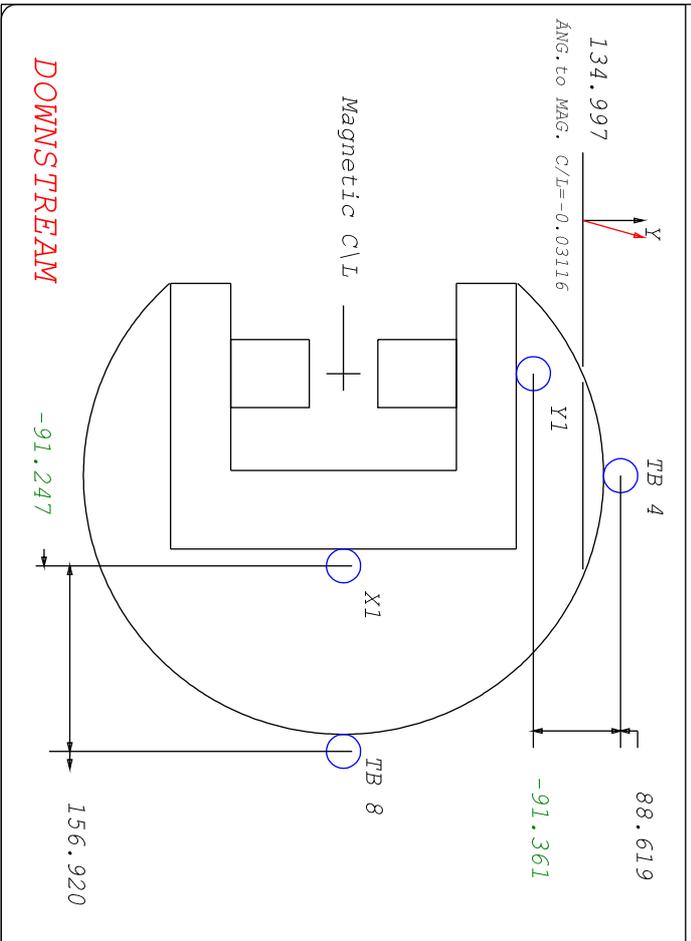
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	-0.1556	179.9659	-1558.293
2	-0.0265	179.9934	-584.4587
3	-0.1431	179.8874	591.3051
4	-0.1869	179.9799	1562.0832
5	248.1659	0.0506	-1558.352
6	248.1115	-0.0477	-584.6012
7	248.1207	0.0235	591.3290
8	248.1673	-0.0836	1562.0911

	C/L Offset	Length
Top Magnetic Structure	-0.096	3381.072
Bottom Magnetic Structure	0.096	3381.296
Strongback	0.267	3399.792

Dimensions in mm

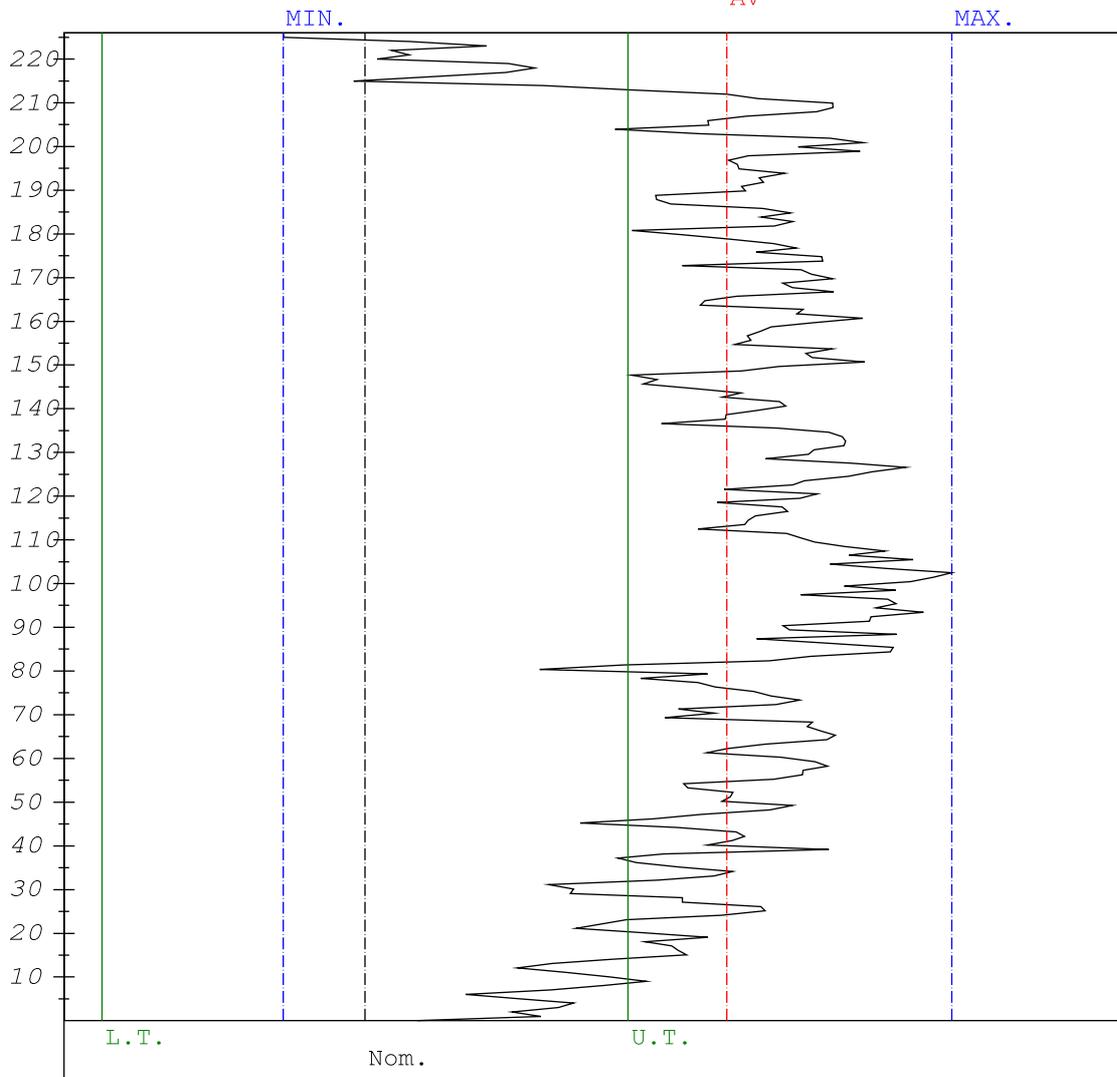
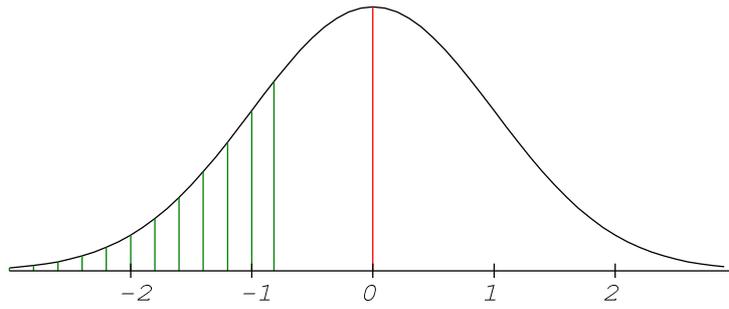
Angles in mrad



**SLAC**  
LCLS-MMF  
LEITZ CMM

Undulator Fiducialization  
Post Magnetic Alignment

DATE: 13-JUN-2007  
UNDULATOR # 13  
DATASET # 0001  
PROGRAM VERSION 1.8



Nominal : 4.5000	Averag : 5.1879	Cent.-Dev. : 0.6879
Up. Tol. : 0.5	Maximum : 5.6151	U.Tol.Ex. > : 79.3 %
Low.Tol. : -0.5	Minimum : 4.3445	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.2303	In Tolerance: 20.7 %
Outlier : 0	Distribution : NOR	Dimension : mrad

**SLAC**  
LCLS-MMF  
LEITZ CMM

Statistical Evaluation  
Pole Tip Gap Angle  
Post Magnetic Alignment

DATE:13-JUN-2007

UNDULATOR # 13  
DATASET # 0001  
PROGRAM VERSION 1.8