

Pole Tip Number ----->

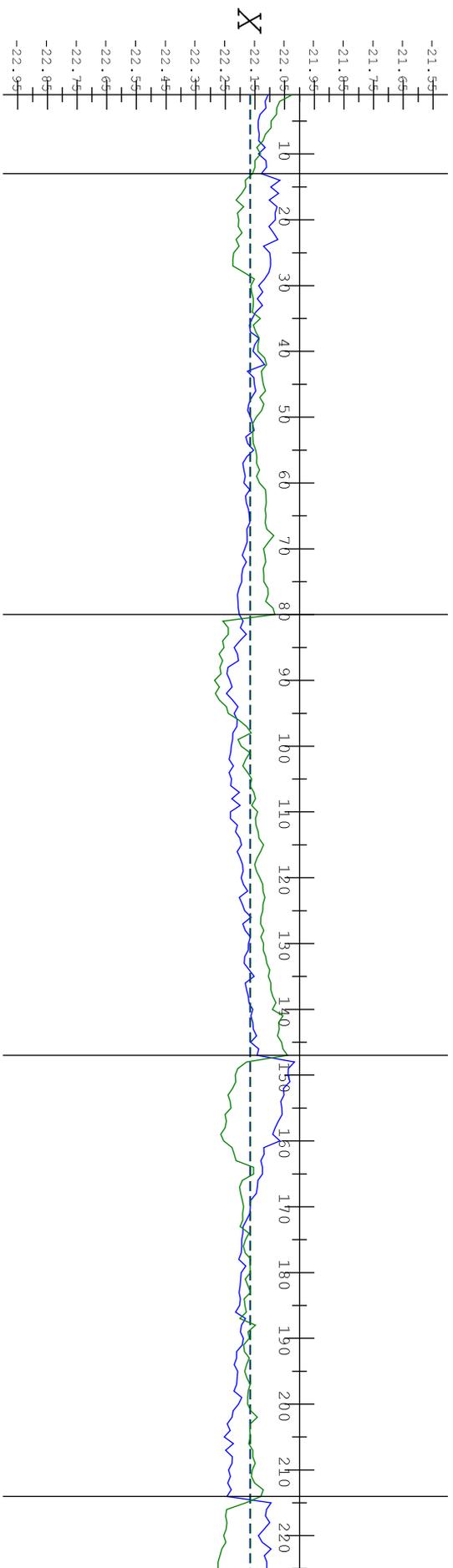
Symmetry Axis is the symmetry axis between the Upper and Lower Pole Tips  
 Included Angle is the angle between the Upper and Lower Pole Tips

**SLAC**  
 LCLS-MMF  
 LEITZ CMM

Undulator Pole Tip Angles  
 Post Magnetic Alignment

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

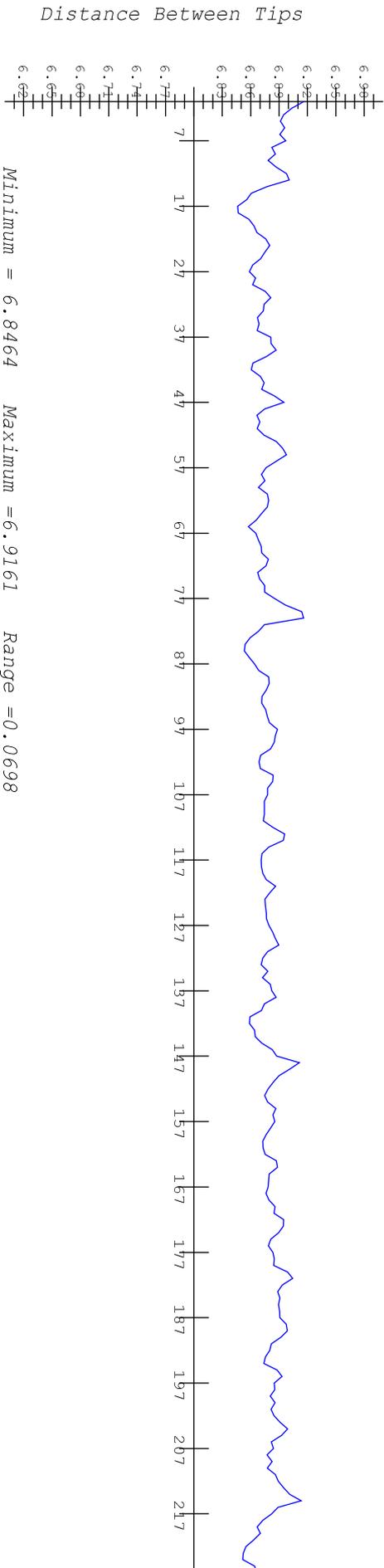
# Pole Tip Number ----->



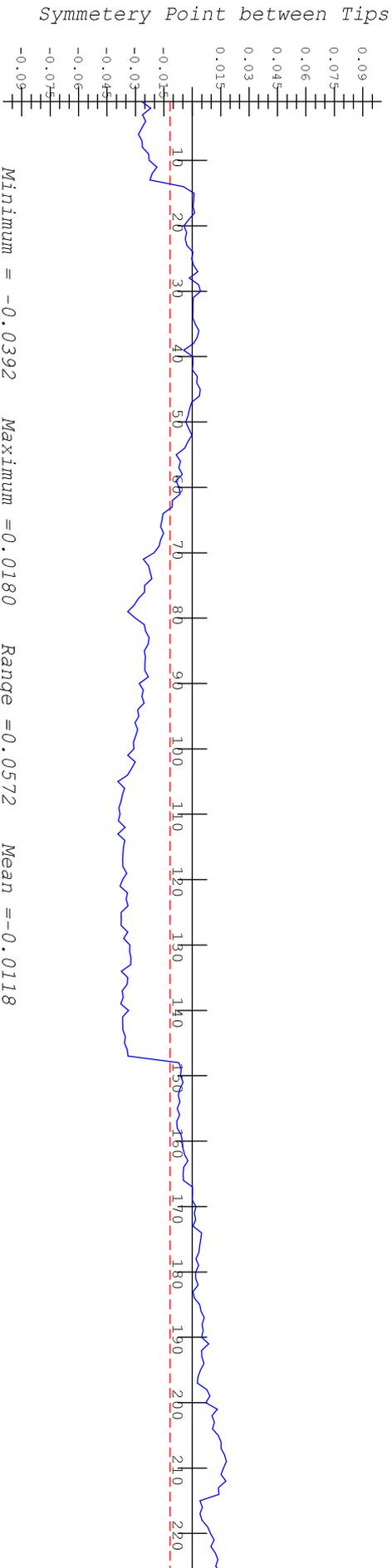
X values in mm

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 = -22.165  
 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 = -22.167

<p><b>SLAC</b>          LCLS-MMF          LEITZ CMM</p>	<p>Undulator Pole Tip Location          Post Magnetic Alignment</p>	<p>DATE: 09-OCT-2007          UNDULATOR # 24          DATASET # 0001          PROGRAM VERSION 2.3</p>
-----------------------------------------------------------------	-------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------



Pole Tip Number ----->

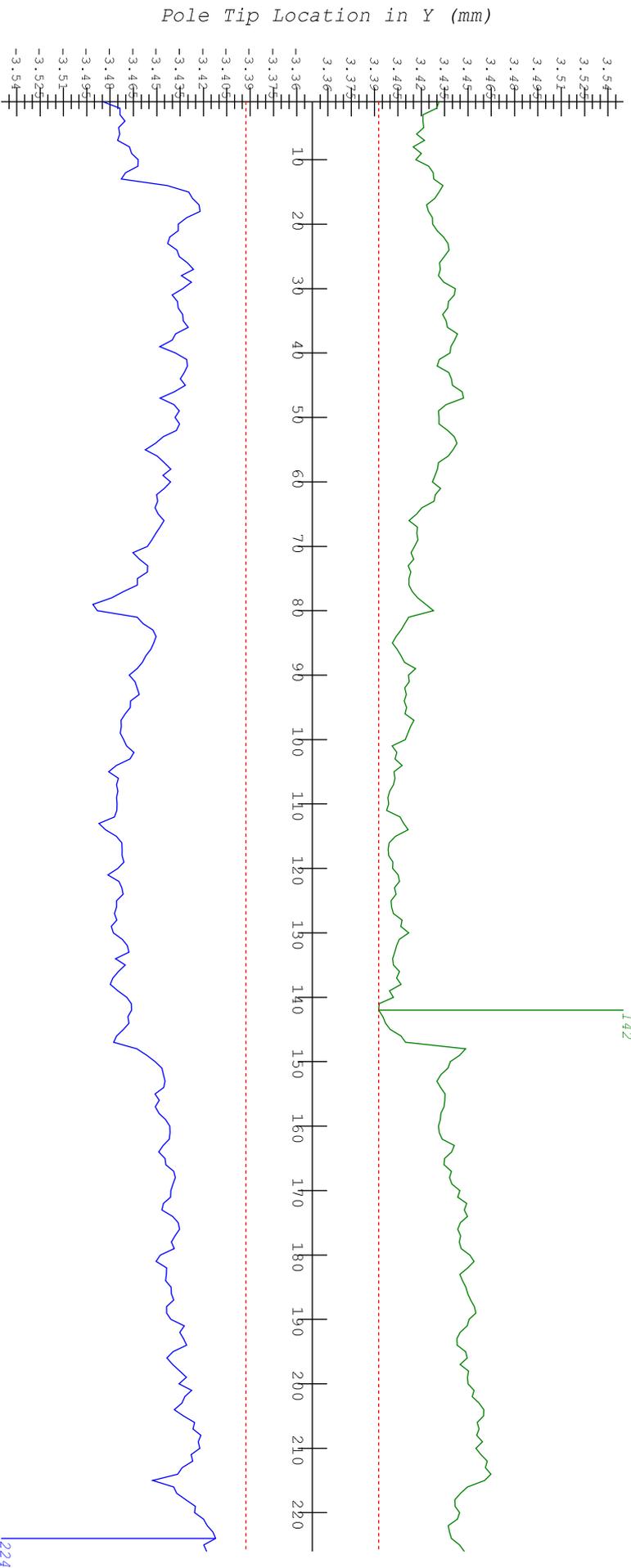


Symmetry Point is the symmetry point between the Upper and Lower Pole Tips were they intersect a YZ plane at the Magnetic C/L  
 Broken Red line is Mean Value of Symmetry Points  
 Distance Between Tips is the distance between the Upper and Lower Pole Tips were they intersect a YZ plane at the Magnetic C/L

<p><b>SLAC</b>          LCLS-MMF          LEITZ CMM</p>	<p>Undulator Pole Tip Location          Post Magnetic Alignment</p>	<p>DATE: 09-OCT-2007          UNDUULATOR # 24          DATASET # 0001          PROGRAM VERSION 2.3</p>
-----------------------------------------------------------------	-------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------

Maximum Chamber Gap = 6.7853

Minimum = 3.3926 Maximum = 3.4647 Range = 0.0721



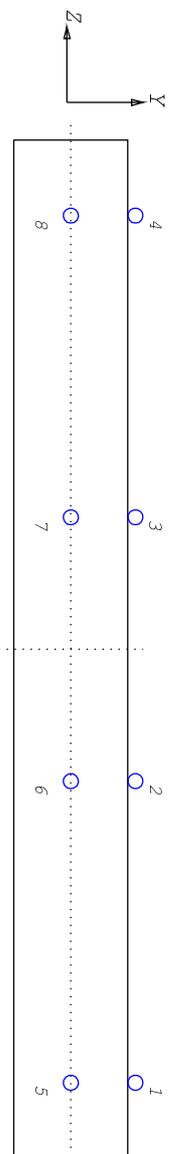
Pole Tip Number ----->

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



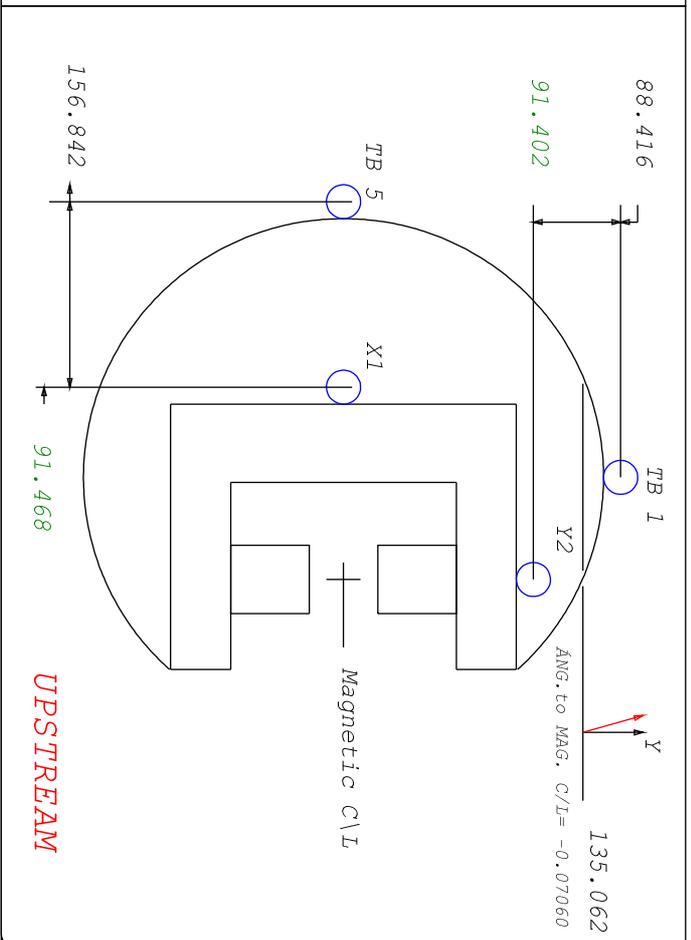
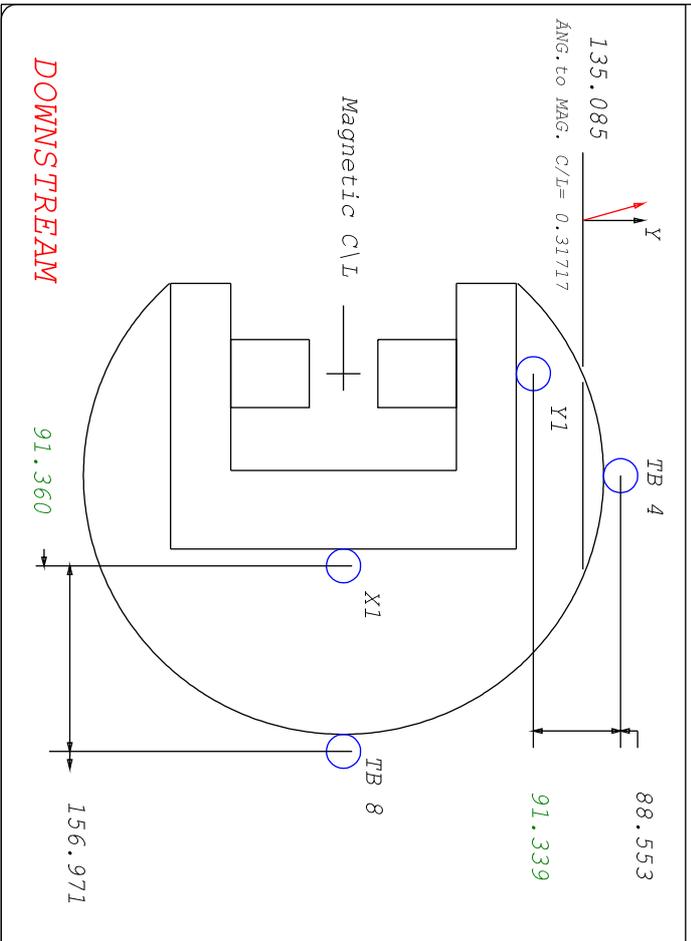
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	0.0055	179.8184	-1558.175
2	0.1971	179.7713	-584.5963
3	0.1365	179.7815	591.3726
4	0.1075	179.8920	1562.1810
5	248.3104	0.1438	-1558.193
6	248.4595	0.0647	-584.5475
7	248.3269	0.2001	591.4031
8	248.3313	0.2281	1562.2944

	C/L Offset	Length
Top Magnetic Structure	-0.005	3380.794
Bottom Magnetic Structure	0.005	3380.872
Strongback	0.430	3399.885

Dimensions in mm

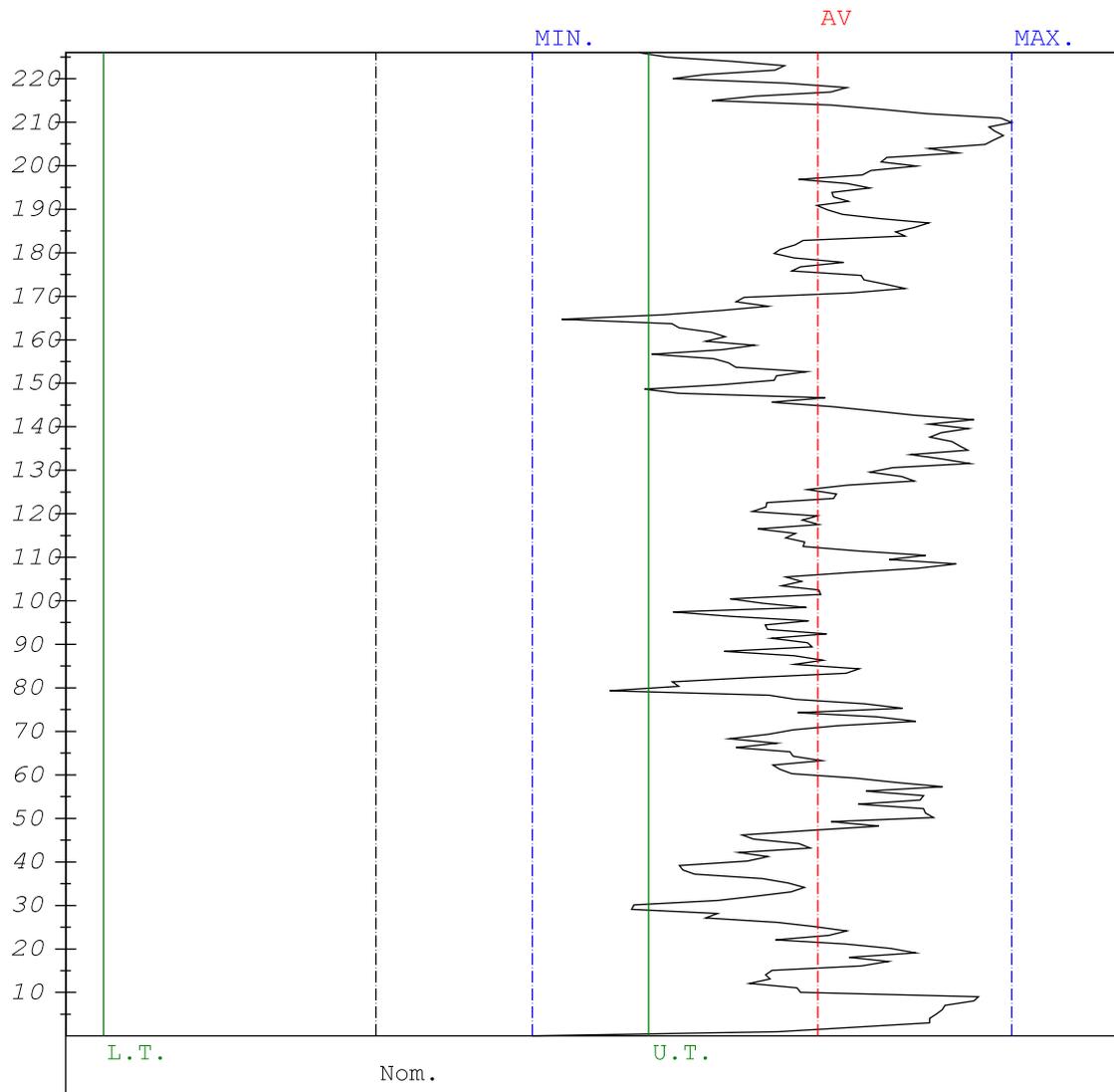
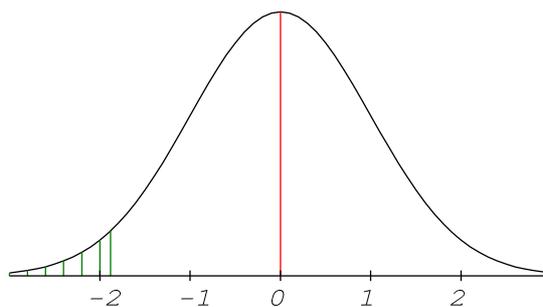
Angles in mrad



**SLAC**  
LCLS-MMF  
LEITZ CMM

Undulator Dimensional Fiducialization  
Post Magnetic Alignment

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



Nominal : 4.5000	Averag : 5.3101	Cent.-Dev. : 0.8101
Up. Tol. : 0.5	Maximum : 5.6657	U.Tol.Ex. > : 97.0 %
Low.Tol. : -0.5	Minimum : 4.7864	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.1649	In Tolerance: 3.0 %
Outlier : 0	Distribution : NOR	Dimension : mrad

**SLAC**  
LCLS-MMF  
LEITZ CMM

Statistical Evaluation  
Pole Tip Gap Angle  
Post Magnetic Alignment

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