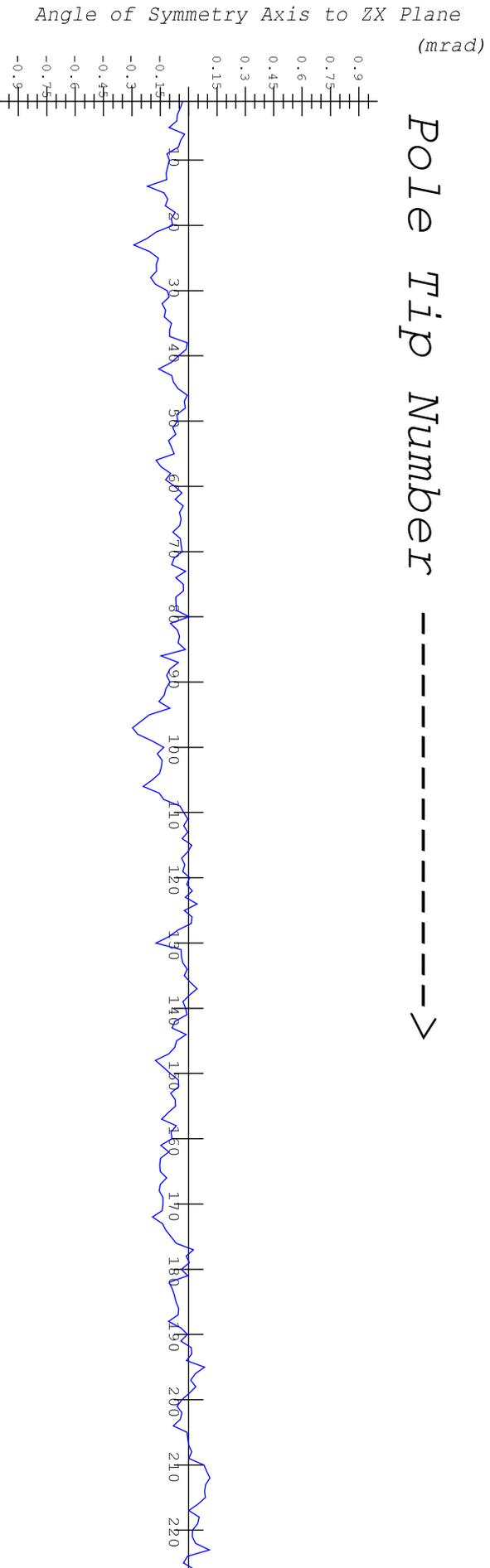


Pole Tip Number ----->



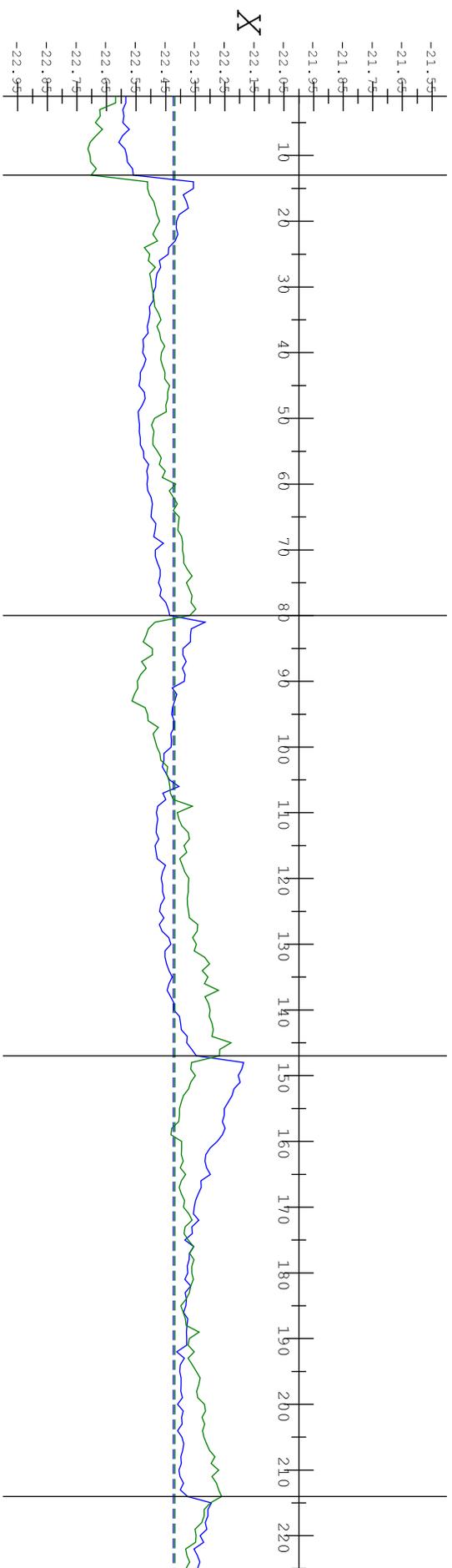
Symmetry Axis is the symmetry axis between the Upper and Lower Pole Tips  
 Included Angle is the angle between the Upper and Lower Pole Tips

**SLAC**  
 LCLS-MMF  
 LEITZ CMM

Undulator Pole Tip Angles  
 Post Magnetic Alignment

DATE: 07-SEP-2007  
 UNDUULATOR # 20  
 DATASET # 0001  
 PROGRAM VERSION 2.1

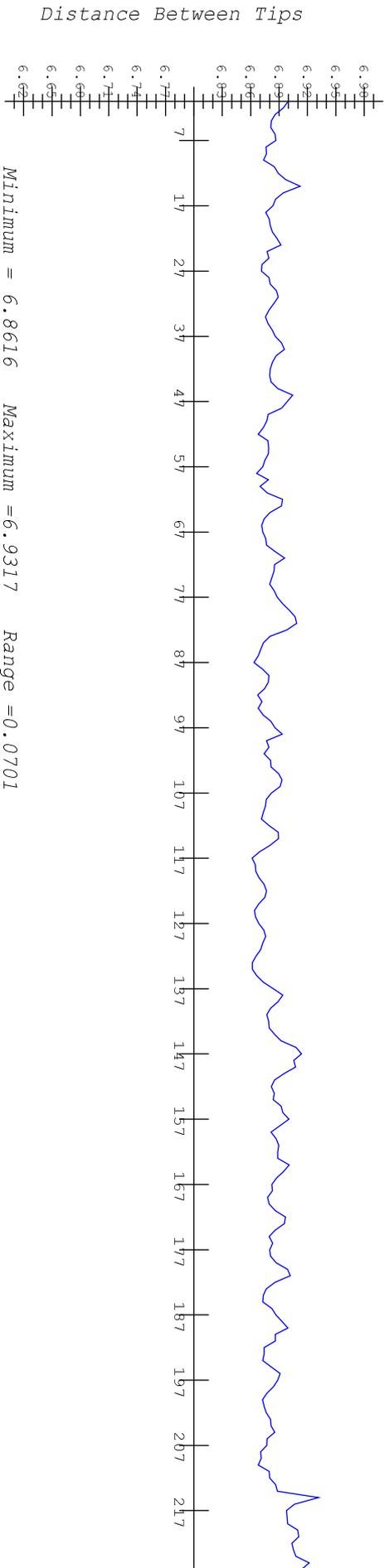
# Pole Tip Number ----->



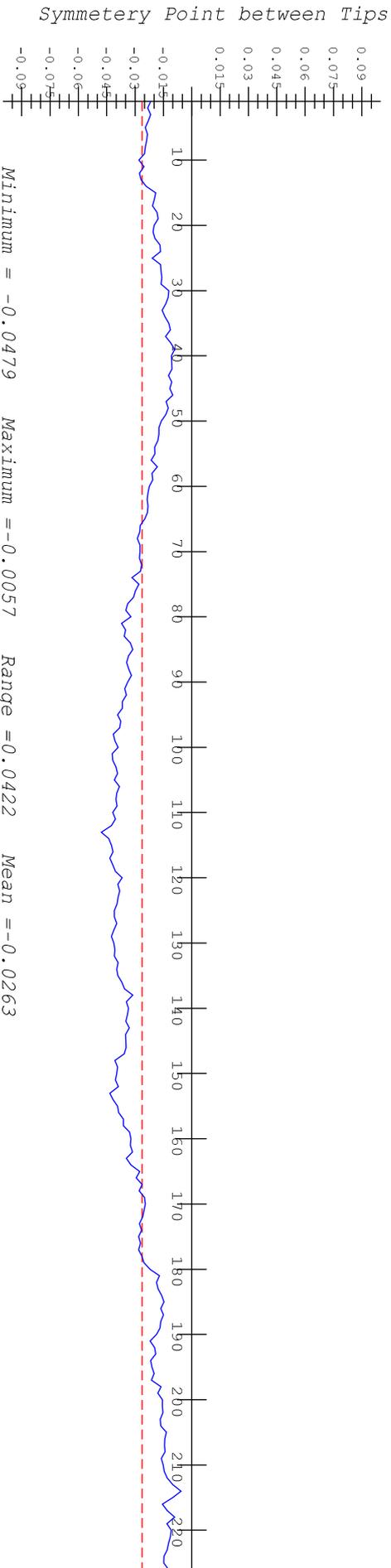
**SLAC**  
 LCLS-MMF  
 LEITZ CMM

Undulator Pole Tip Location  
 Post Magnetic Alignment

DATE: 07-SEP-2007  
 UNDULATOR # 20  
 DATASET # 0001  
 PROGRAM VERSION 2.1



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

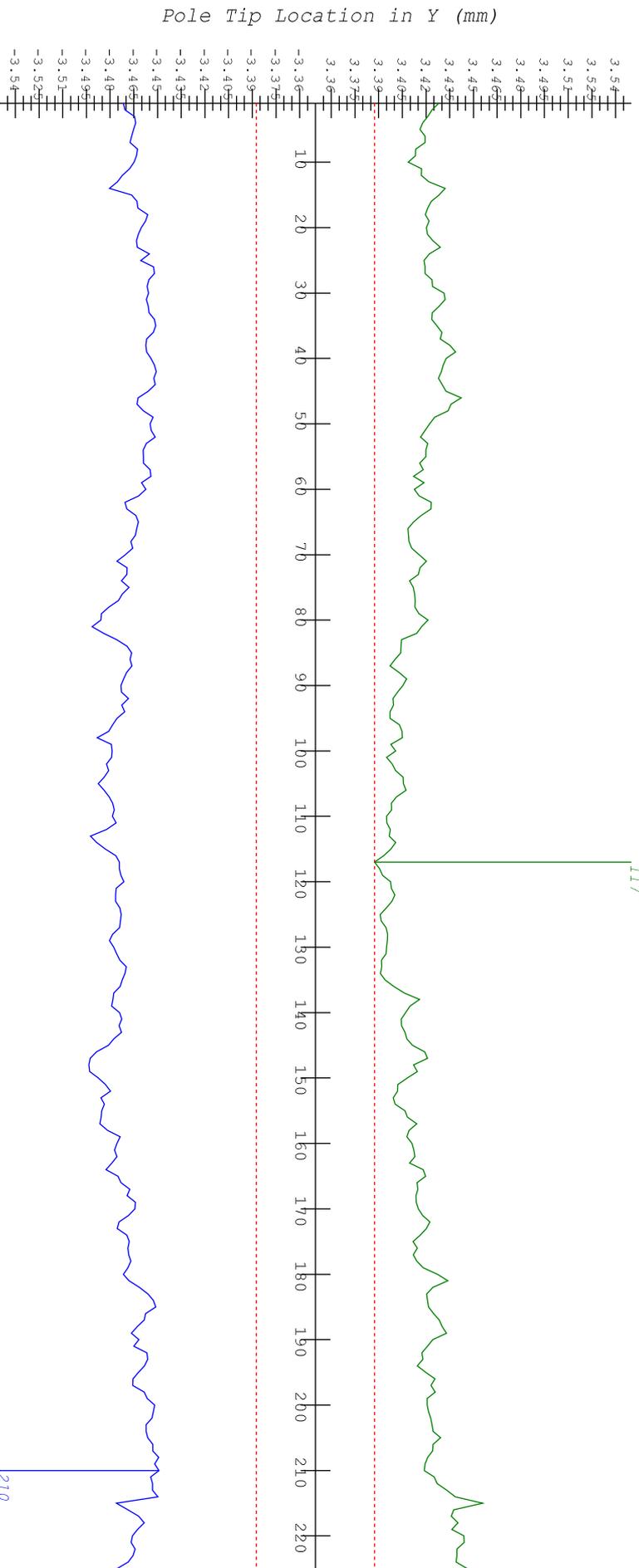
**SLAC**  
 LCLS-MMF  
 LEITZ CMM

Undulator Pole Tip Location  
 Post Magnetic Alignment

DATE: 07-SEP-2007  
 UNDUULATOR # 20  
 DATASET # 0001  
 PROGRAM VERSION 2.1

Maximum Chamber Gap = 6.7748

Minimum = 3.3874    Maximum = 3.4557    Range = 0.0683



Minimum = -3.4935    Maximum = -3.4491    Range = 0.0444

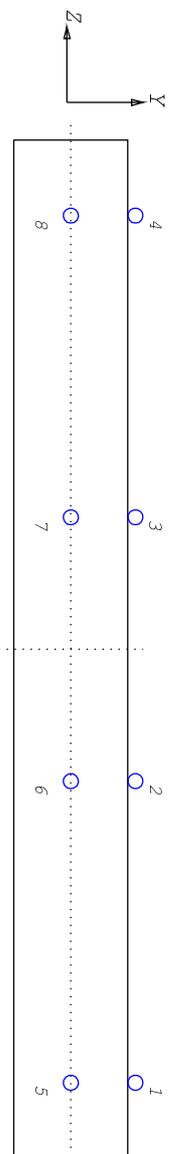
Pole Tip Number ----->

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)

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LEITZ CMM

Undulator Pole Tip Location  
Post Magnetic Alignment

DATE: 07-SEP-2007  
UNDULATOR # 20  
DATASET # 0001  
PROGRAM VERSION 2.1



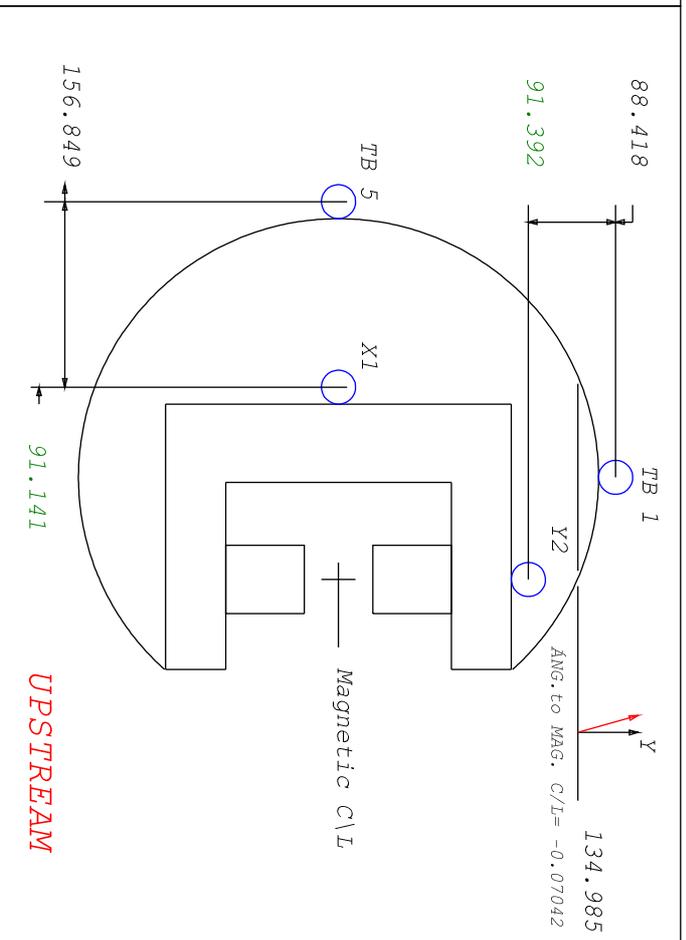
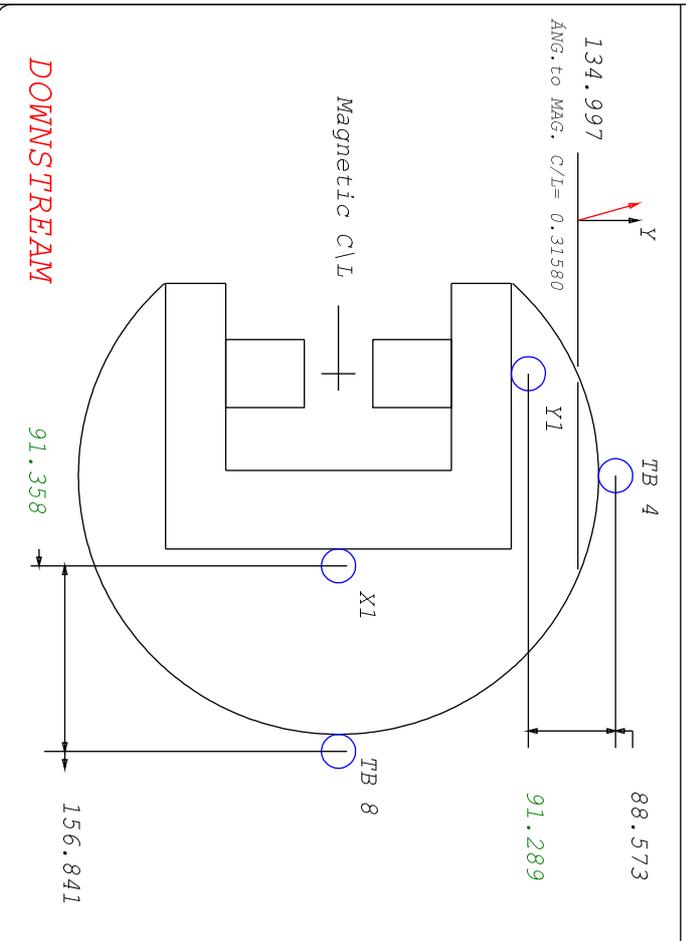
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	-0.3878	179.8098	-1558.350
2	-0.1272	179.7207	-584.7285
3	-0.0450	179.7438	591.2082
4	0.0800	179.8623	1562.1138
5	247.9896	0.0729	-1558.298
6	248.1136	0.0080	-584.7605
7	248.1629	0.0808	591.3899
8	248.1995	0.0515	1562.2030

	C/L Offset	Length
Top Magnetic Structure	-0.061	3380.876
Bottom Magnetic Structure	0.061	3381.100
Strongback	0.334	3399.956

Dimensions in mm

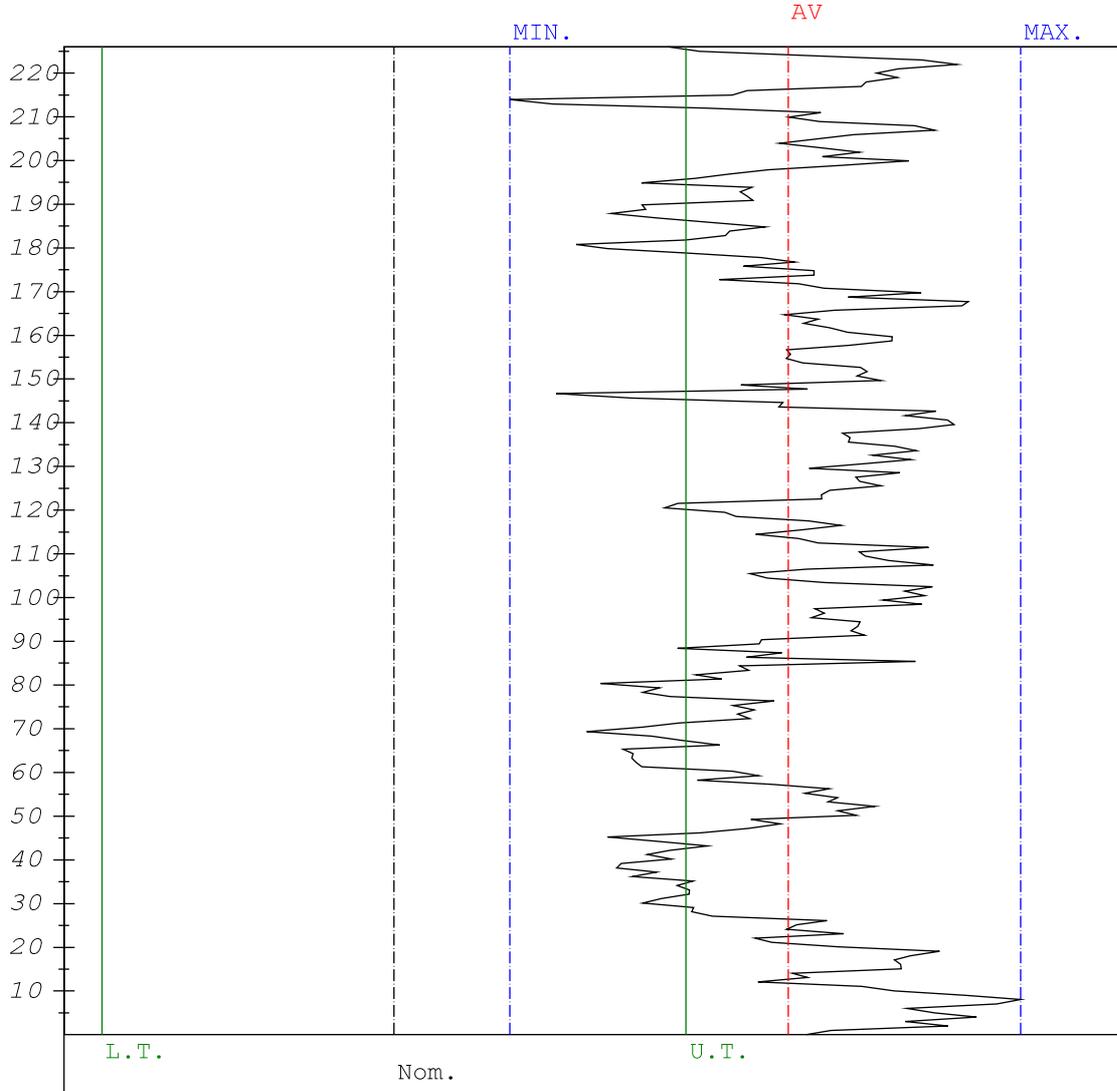
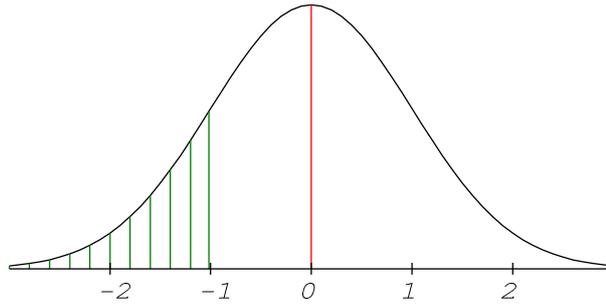
Angles in mrad



**SLAC**  
LCLS-MMF  
LEITZ CMM

Undulator Dimensional Fiducialization  
Post Magnetic Alignment

DATE: 07-SEP-2007  
UNDULATOR # 20  
DATASET # 0001  
PROGRAM VERSION 2.1



Nominal : 4.5000	Averag : 5.1752	Cent.-Dev. : 0.6752
Up. Tol. : 0.5	Maximum : 5.5732	U.Tol.Ex. > : 84.5 %
Low.Tol. : -0.5	Minimum : 4.6981	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.1724	In Tolerance: 15.5 %
Outlier : 0	Distribution : NOR	Dimension : mrad

<p><b>SLAC</b> LCLS-MMF LEITZ CMM</p>	<p>Statistical Evaluation Pole Tip Gap Angle Post Magnetic Alignment</p>	<p>DATE: 07-SEP-2007 UNDULATOR # 20 DATASET # 0001 PROGRAM VERSION 2.1</p>
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