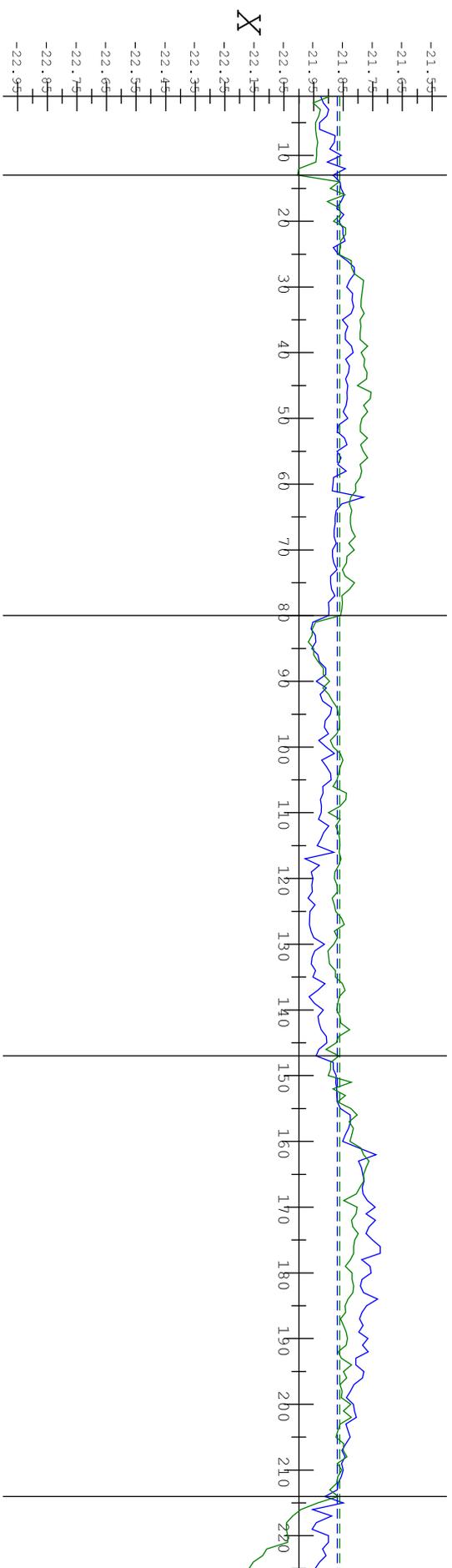


Symmetry Axis is the symmetry axis between the Upper and Lower Pole Tips  
 Included Angle is the angle between the Upper and Lower Pole Tips

<p><b>SLAC</b>          LCLS-MMF          LEITZ CMM</p>	<p>Undulator Pole Tip Angles          Post Magnetic Alignment</p>	<p>DATE: 30-OCT-2008          UNDULATOR # 13          DATASET # 0014          PROGRAM VERSION 2.7</p>
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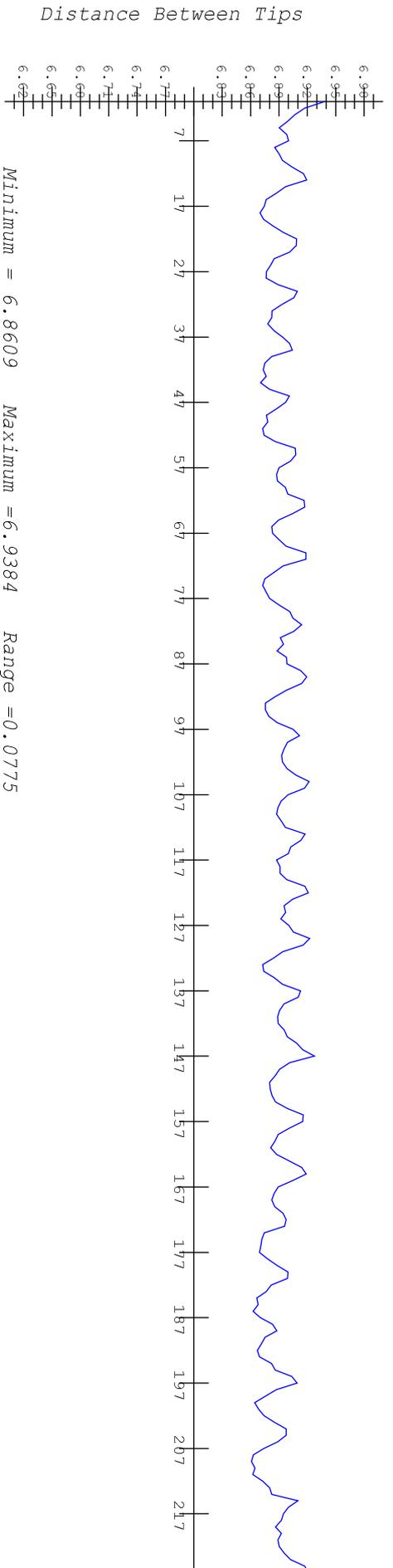
# Pole Tip Number ----->



**SLAC**  
 LCLS-MMF  
 LEITZ CMM

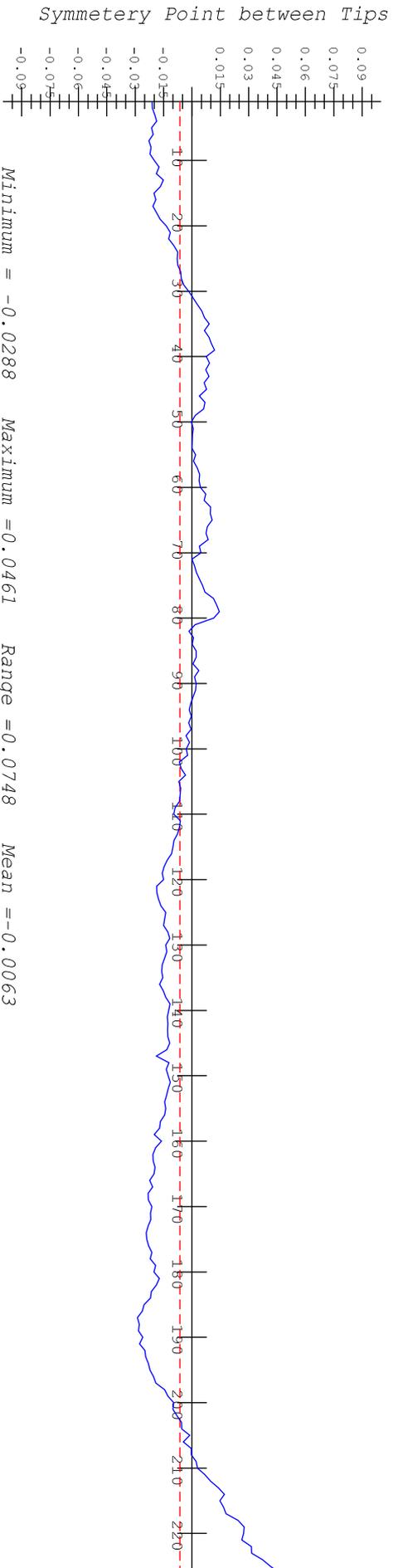
Undulator Pole Tip Location  
 Post Magnetic Alignment

DATE: 30-OCT-2008  
 UNDULATOR # 13  
 DATASET # 0014  
 PROGRAM VERSION 2.7



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

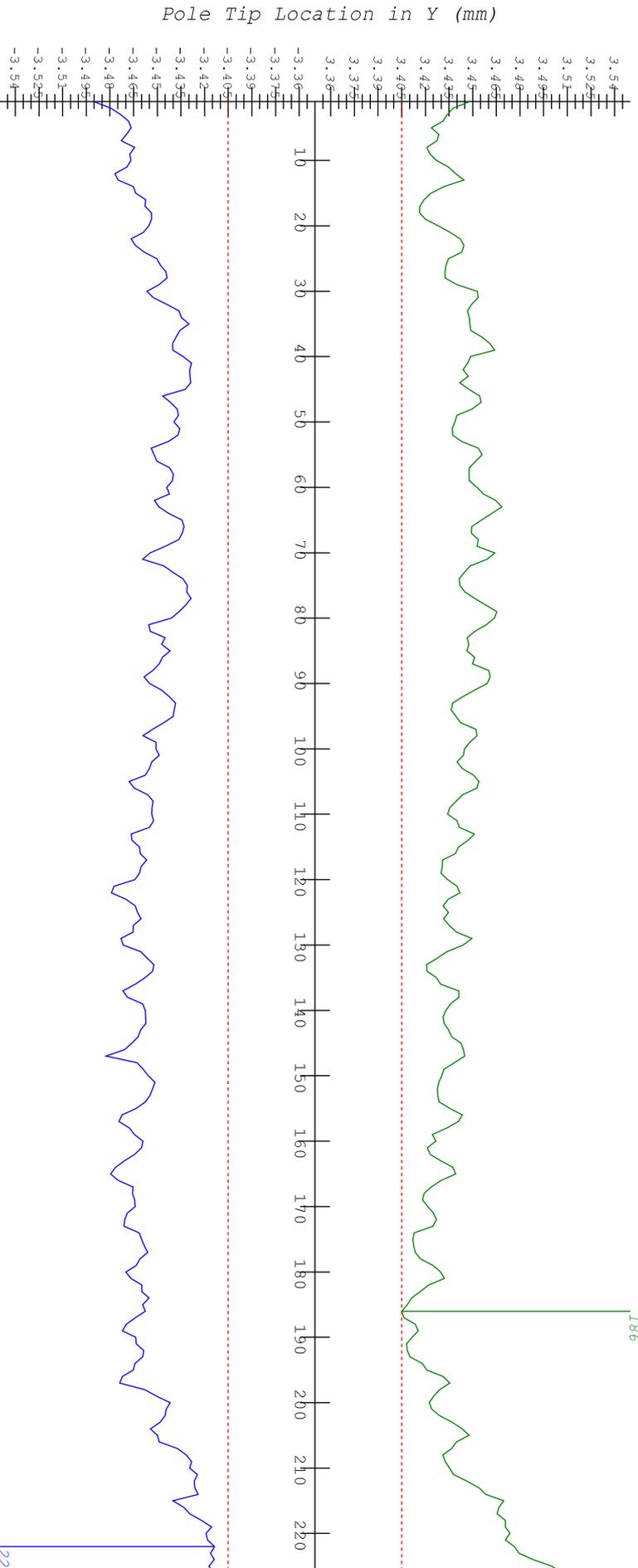
**SLAC**  
 LCLS-MMF  
 LEITZ CMM

Undulator Pole Tip Location  
 Post Magnetic Alignment

DATE: 30-OCT-2008  
 UNDUULATOR # 13  
 DATASET # 0014  
 PROGRAM VERSION 2.7

Maximum Chamber Gap = 6.8101

Minimum = 3.4050 Maximum = 3.5064 Range = 0.1013



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: 30-OCT-2008  
UNDULATOR # 13  
DATASET # 0014  
PROGRAM VERSION 2.7



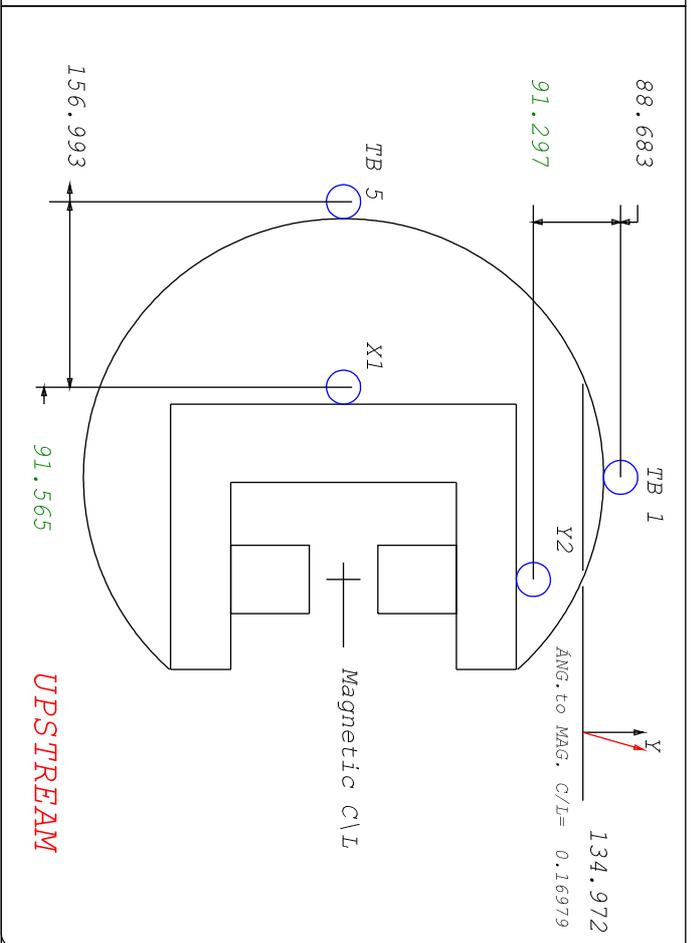
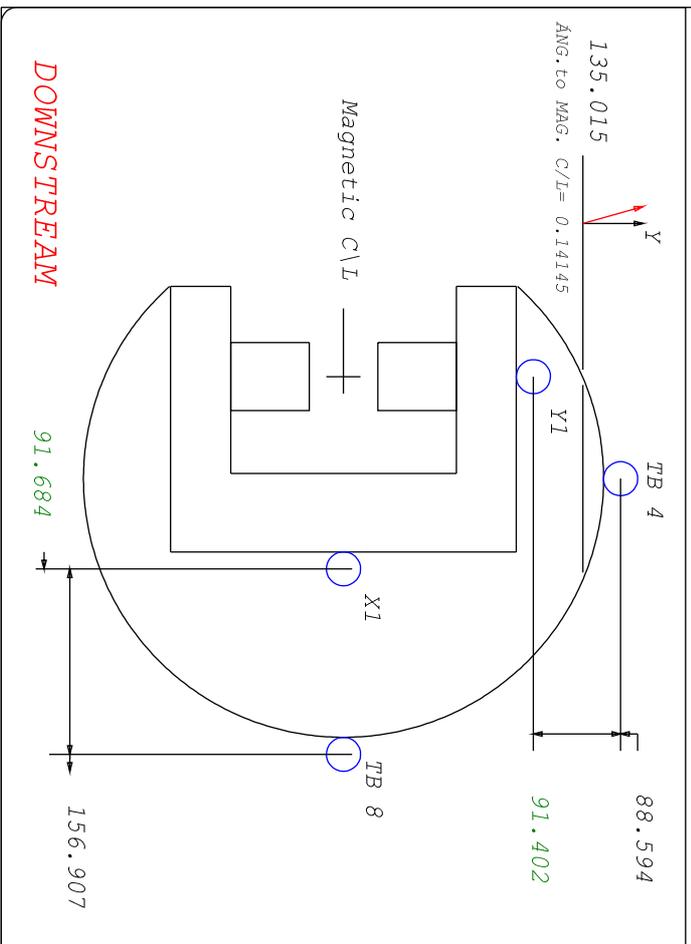
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	0.2315	179.9804	-1558.287
2	0.3655	180.0077	-584.4540
3	0.2634	179.8969	591.3037
4	0.2383	179.9956	1562.0744
5	248.5577	0.0803	-1558.309
6	248.5088	-0.0250	-584.5967
7	248.5295	0.0459	591.3247
8	248.5912	-0.0584	1562.0801

	C/L Offset	Length
Top Magnetic Structure	-0.096	3381.052
Bottom Magnetic Structure	0.096	3381.276
Strongback	0.250	3399.775

Dimensions in mm

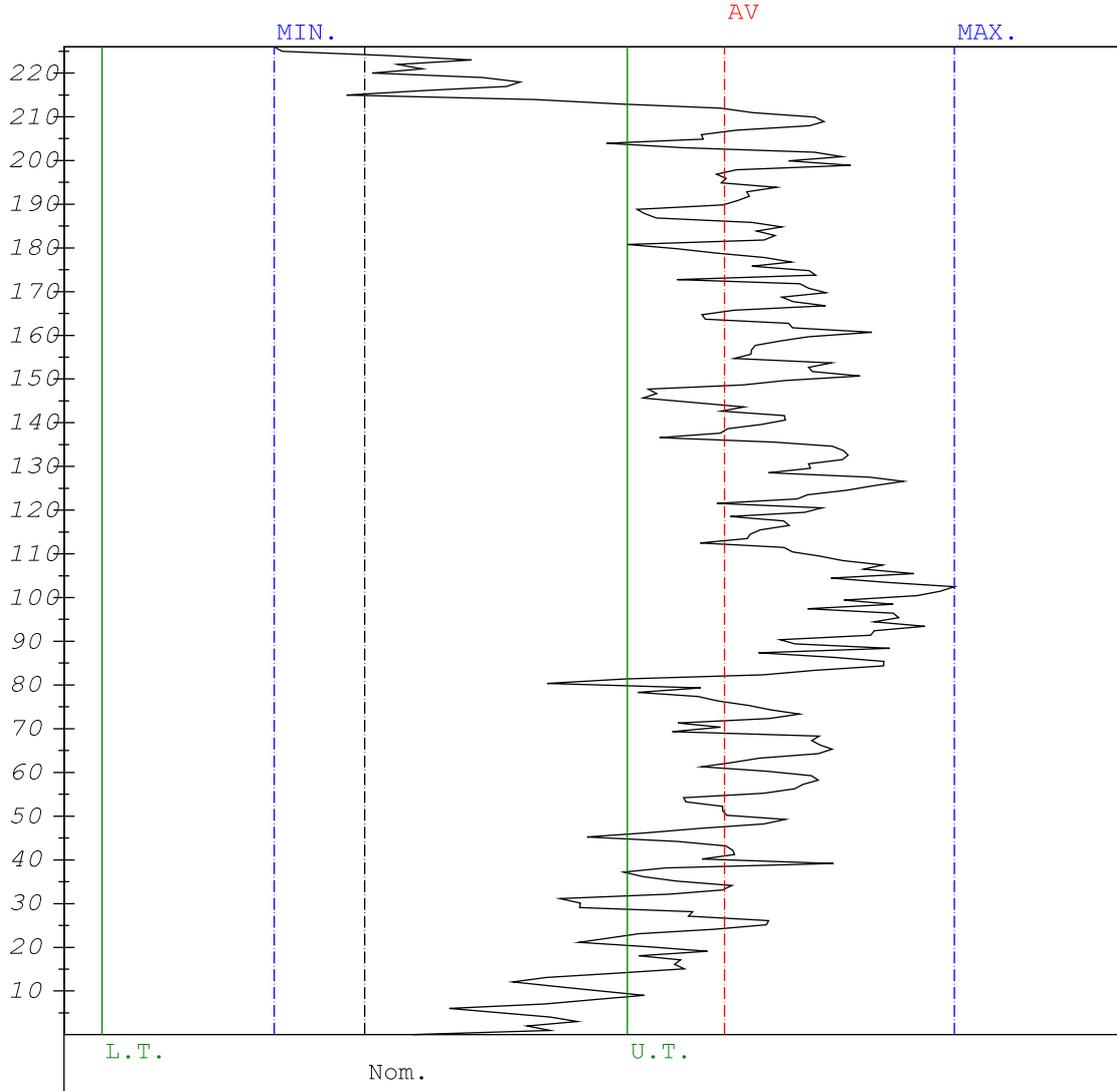
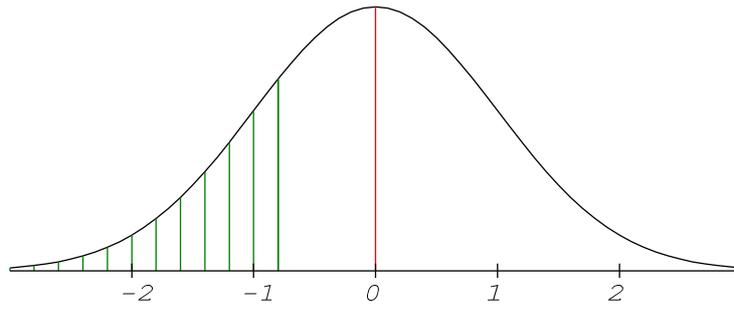
Angles in mrad



**SLAC**  
LCLS-MMF  
LEITZ CMM

Undulator Dimensional Fiducialization  
Post Magnetic Alignment

DATE: 30-OCT-2008  
UNDULATOR # 13  
DATASET # 0014  
PROGRAM VERSION 2.7



Nominal : 4.5000	Averag : 5.1849	Cent.-Dev. : 0.6849
Up. Tol. : 0.5	Maximum : 5.6220	U.Tol.Ex. > : 78.7 %
Low.Tol. : -0.5	Minimum : 4.3278	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.2320	In Tolerance: 21.3 %
Outlier : 0	Distribution : NOR	Dimension : mrad

**SLAC**  
LCLS-MMF  
LEITZ CMM

Statistical Evaluation  
Pole Tip Gap Angle  
Post Magnetic Alignment

DATE: 30-OCT-2008  
UNDULATOR # 13  
DATASET # 0014  
PROGRAM VERSION 2.7