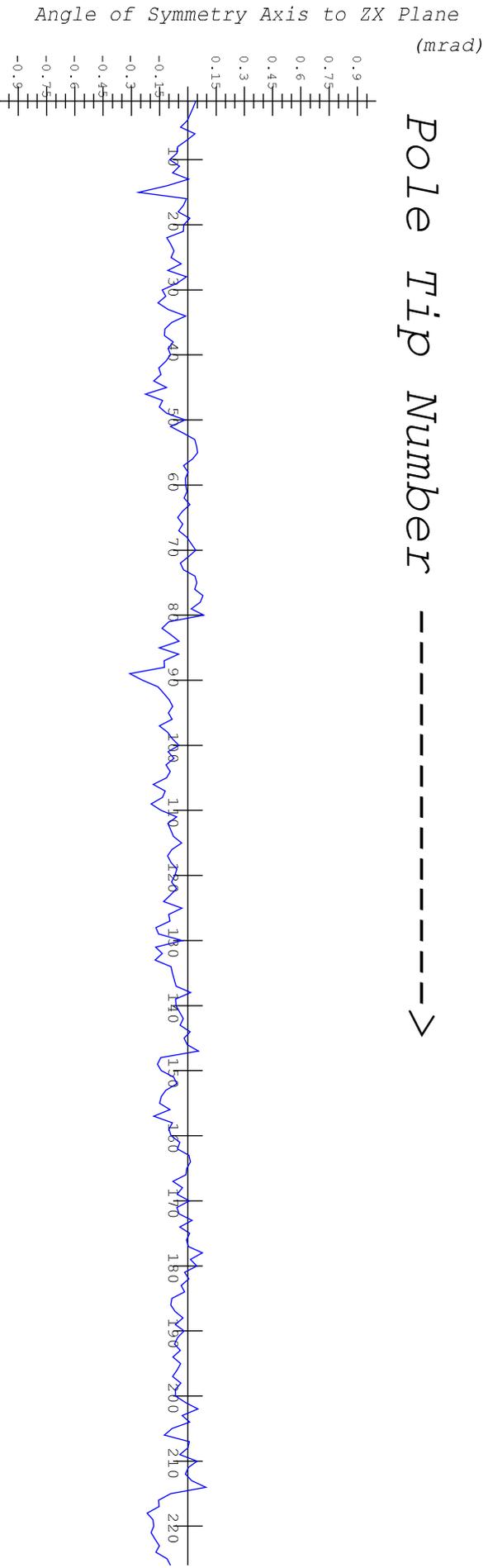


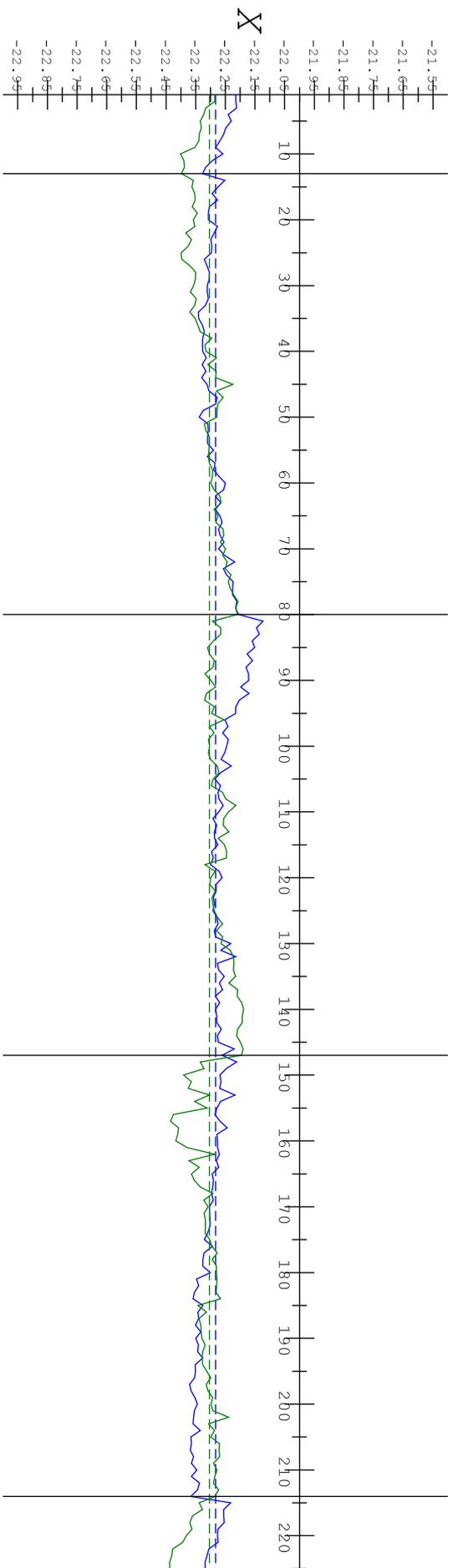
Pole Tip Number ----->



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>SLAC LCLS-MMF LEITZ CMM</p>	<p>Undulator Pole Tip Angles Post Magnetic Alignment</p>	<p>DATE: 22-SEP-2008 UNDULATOR # 31 DATASET # 0003 PROGRAM VERSION 2.7</p>
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Pole Tip Number ----->



X values in mm

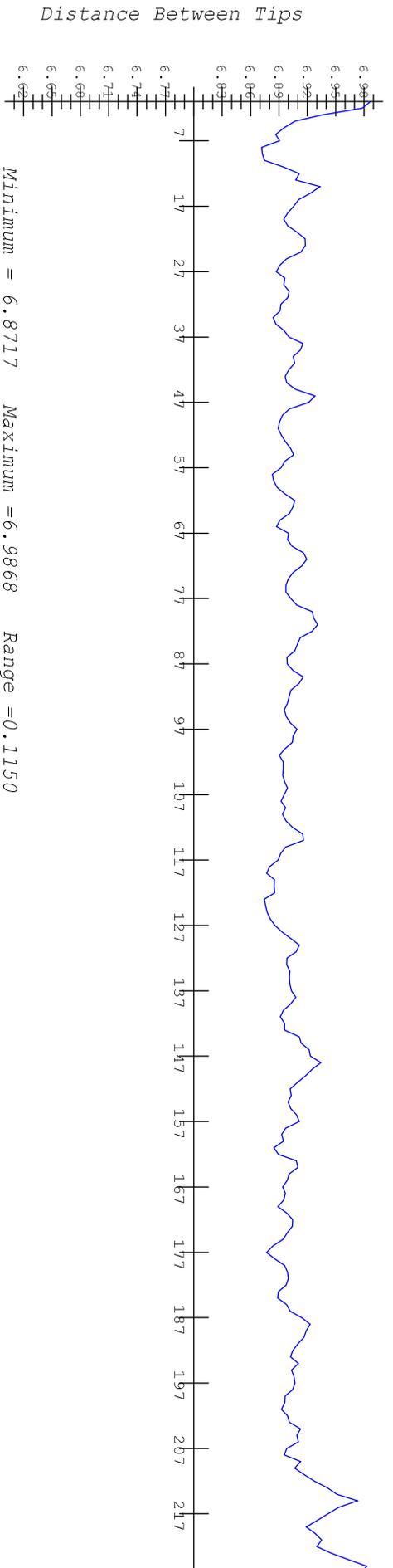
Green Solid = Point on front face of Upper Pole Tip 10mm above Magnetic C/L
 Green Dash = Mean value of all Upper Pole Tips 10mm above Magnetic C/L Mean value Upper Pole Tips = -22.303

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

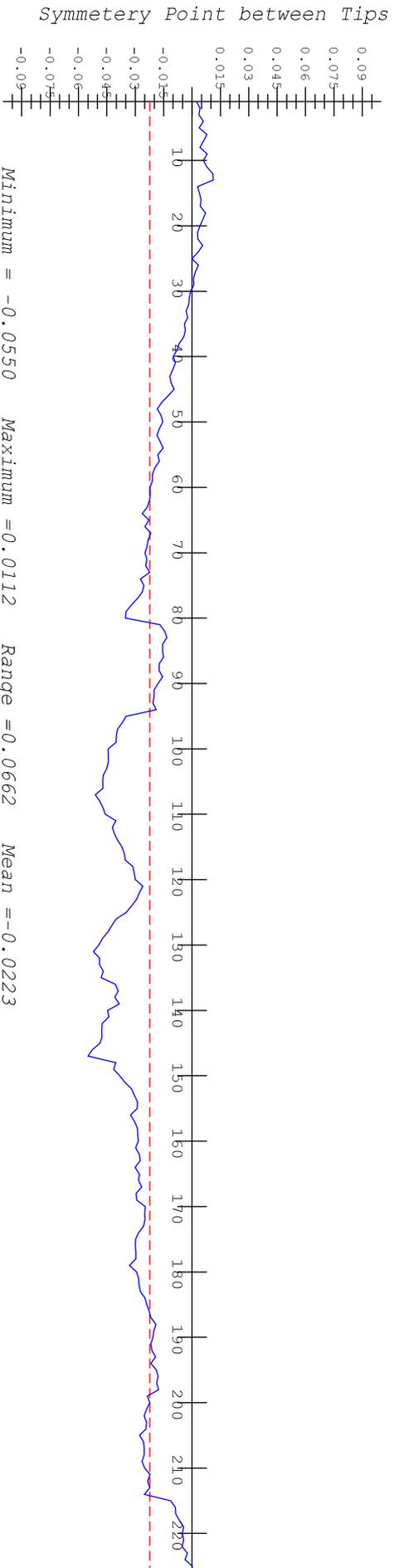
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 LCLS-MMF
 LEITZ CMM

Undulator Pole Tip Location
 Post Magnetic Alignment

DATE: 22-SEP-2008
 UNDULATOR # 31
 DATASET # 0003
 PROGRAM VERSION 2.7



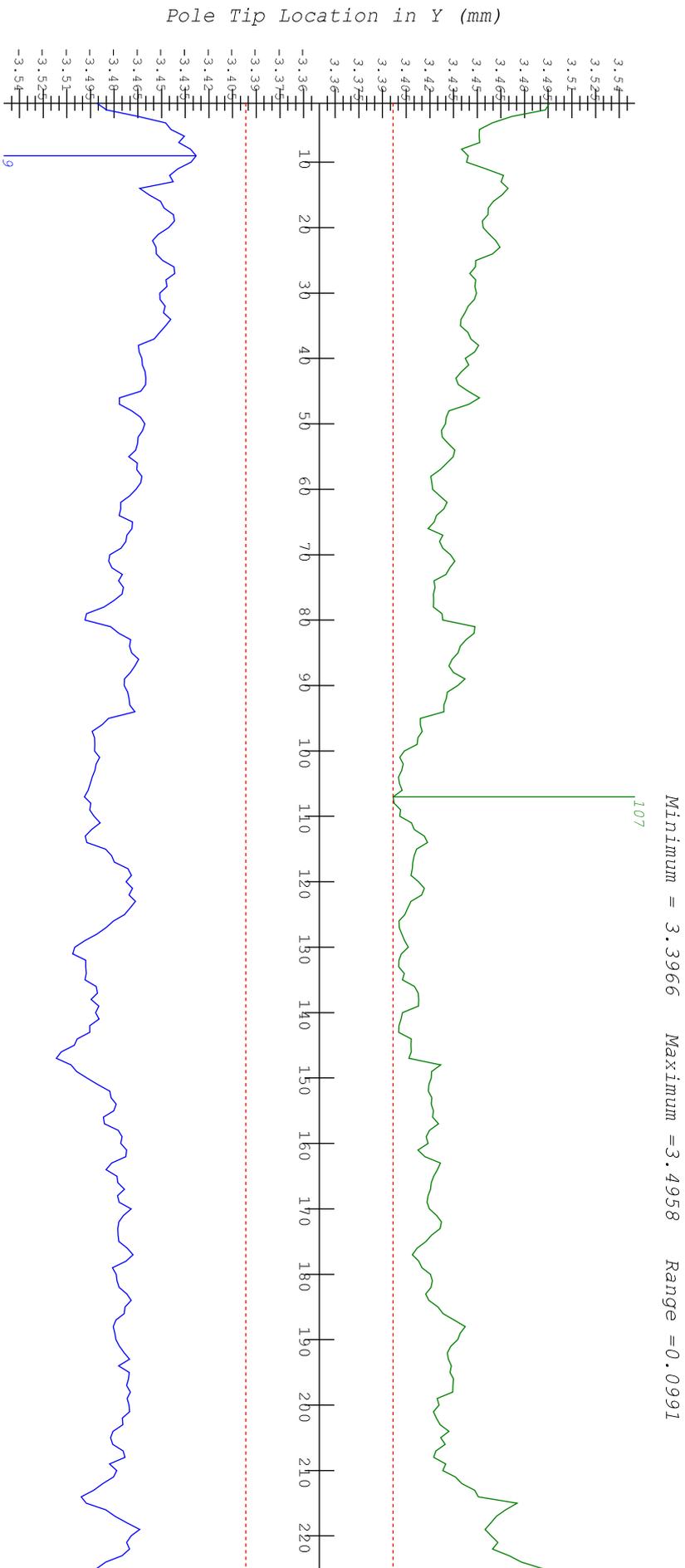
Pole Tip Number ----->



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>Undulator Pole Tip Location</p> <p>Post Magnetic Alignment</p>	<p>DATE: 22-SEP-2008</p> <p>UNDULATOR # 31</p> <p>DATASET # 0003</p> <p>PROGRAM VERSION 2.7</p>
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Maximum Chamber Gap = 6.7933



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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Undulator Pole Tip Location
Post Magnetic Alignment

DATE: 22-SEP-2008
UNDULATOR # 31
DATASET # 0003
PROGRAM VERSION 2.7



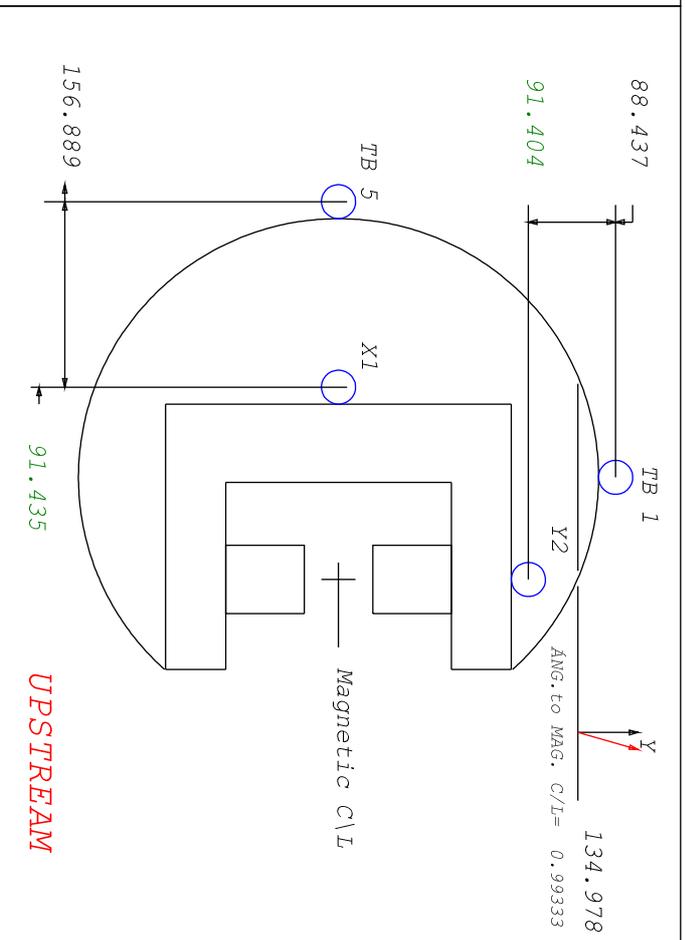
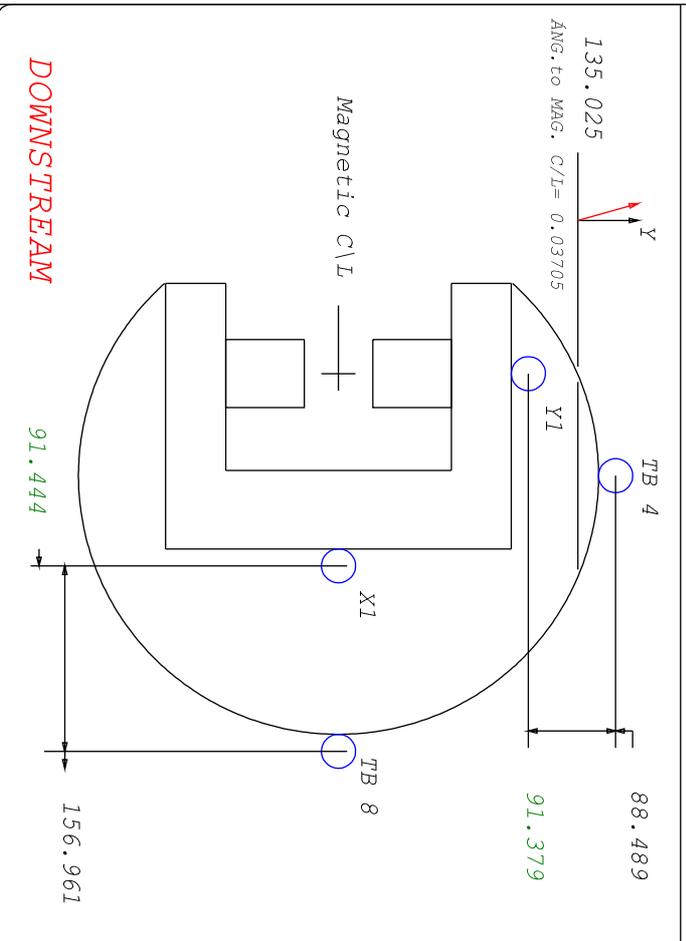
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	0.0356	179.8414	-1558.287
2	0.1900	179.7705	-584.7619
3	0.2360	179.7348	591.3281
4	0.2719	179.8677	1562.1935
5	248.3241	0.0295	1558.362
6	248.3748	0.0528	-584.7484
7	248.4221	0.0179	591.3701
8	248.4050	0.0448	1562.1988

	C/L Offset	Length
Top Magnetic Structure	-0.023	3381.143
Bottom Magnetic Structure	0.023	3381.089
Strongback	0.296	3399.995

Dimensions in mm

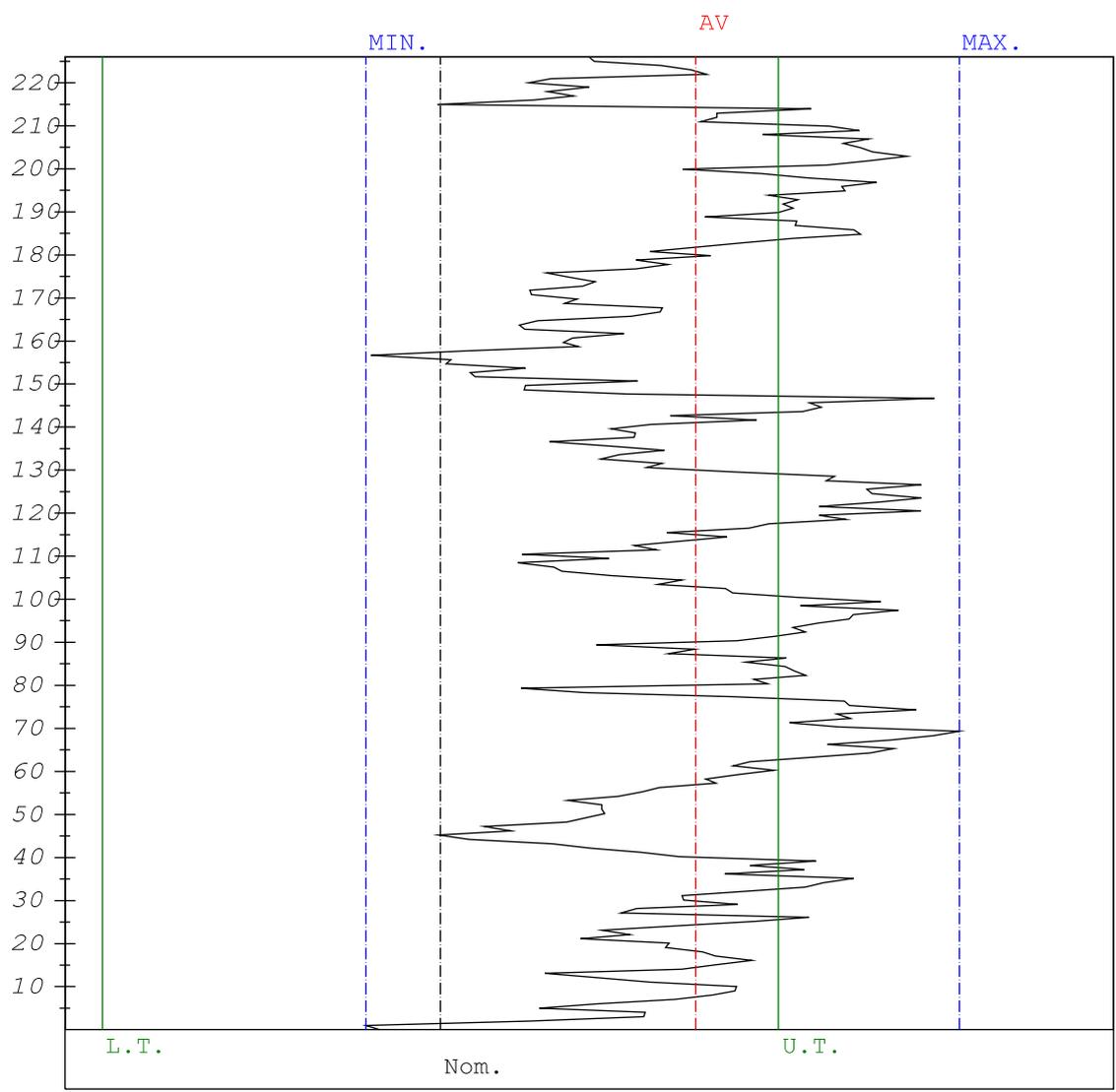
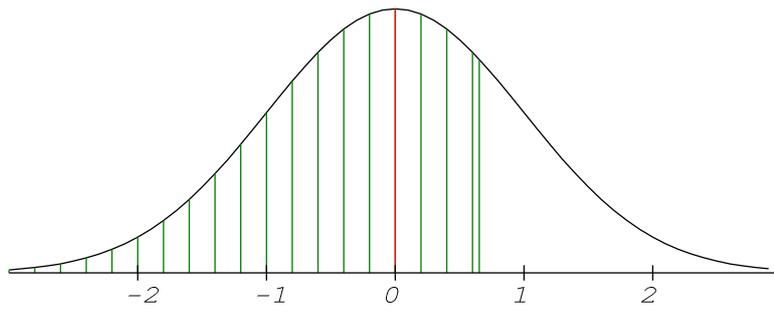
Angles in mrad



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Undulator Dimensional Fiducialization
Post Magnetic Alignment

DATE: 22-SEP-2008
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DATASET # 0003
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Nominal : 4.5000	Averag : 4.8773	Cent.-Dev. : 0.3773
Up. Tol. : 0.5	Maximum : 5.2677	U.Tol.Ex. > : 25.7 %
Low.Tol. : -0.5	Minimum : 4.3898	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.1875	In Tolerance: 74.3 %
Outlier : 0	Distribution : NOR	Dimension : mrad

<p>SLAC LCLS-MMF LEITZ CMM</p>	<p>Statistical Evaluation Pole Tip Gap Angle Post Magnetic Alignment</p>	<p>DATE: 22-SEP-2008 UNDULATOR # 31 DATASET # 0003 PROGRAM VERSION 2.7</p>
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