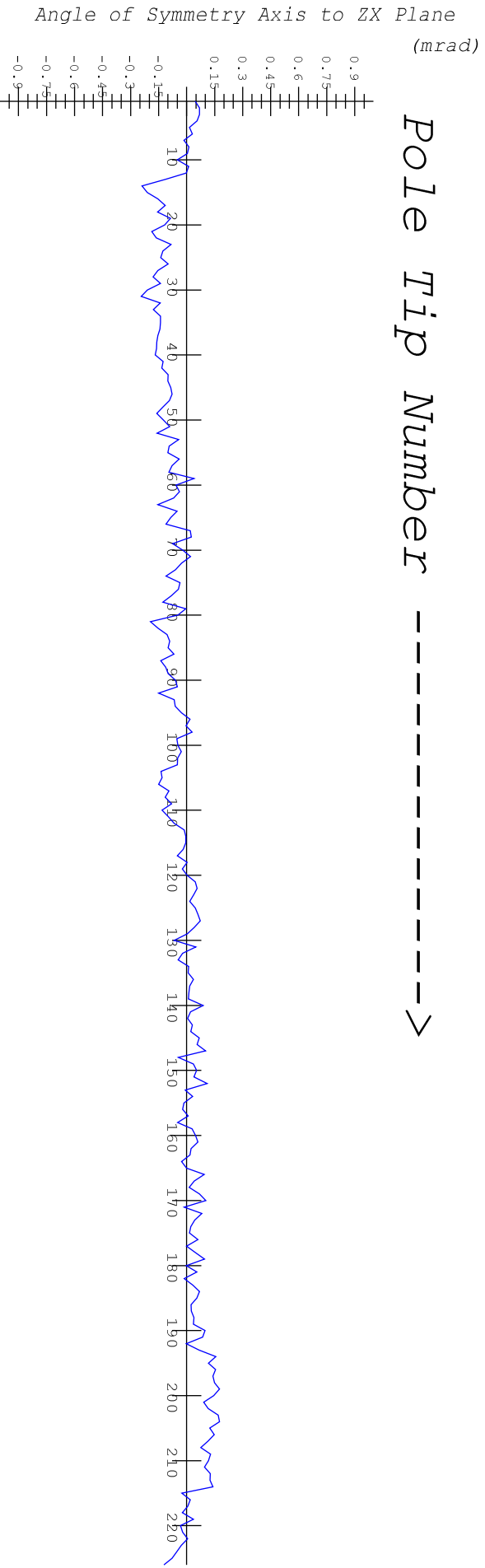


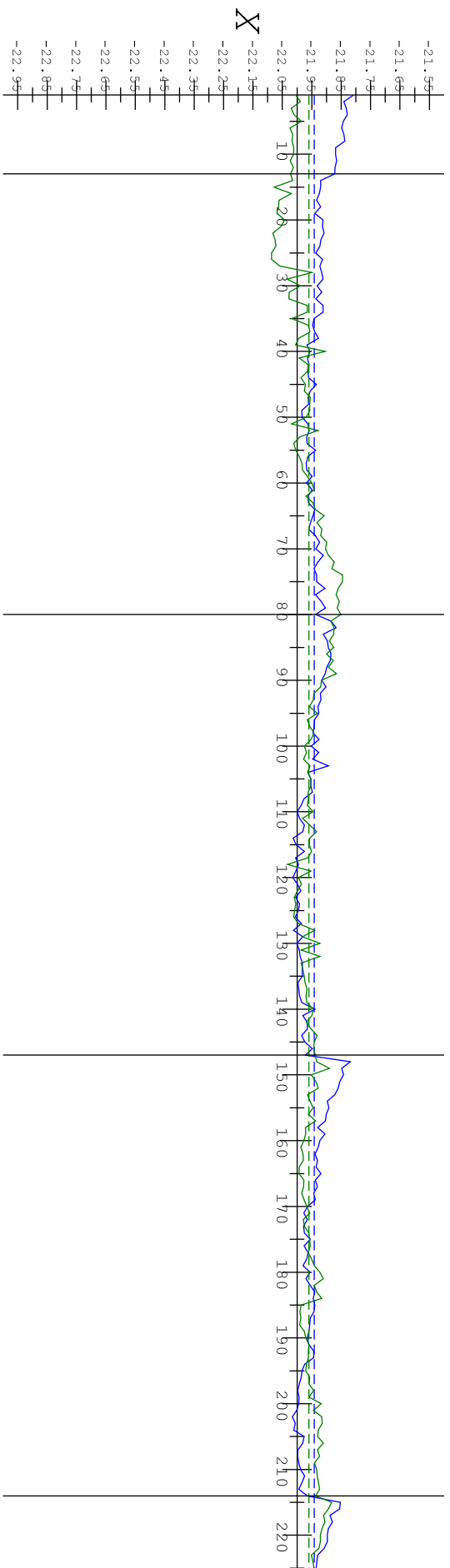
Pole Tip Number ----->



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 WITH FLAT FEET - .812mm SHIM US -X</p>	<p>DATE: 02-NOV-2007 UNDULATOR # 39 DATASET # 0001 PROGRAM VERSION 2.3</p>
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Pole Tip Number ----->

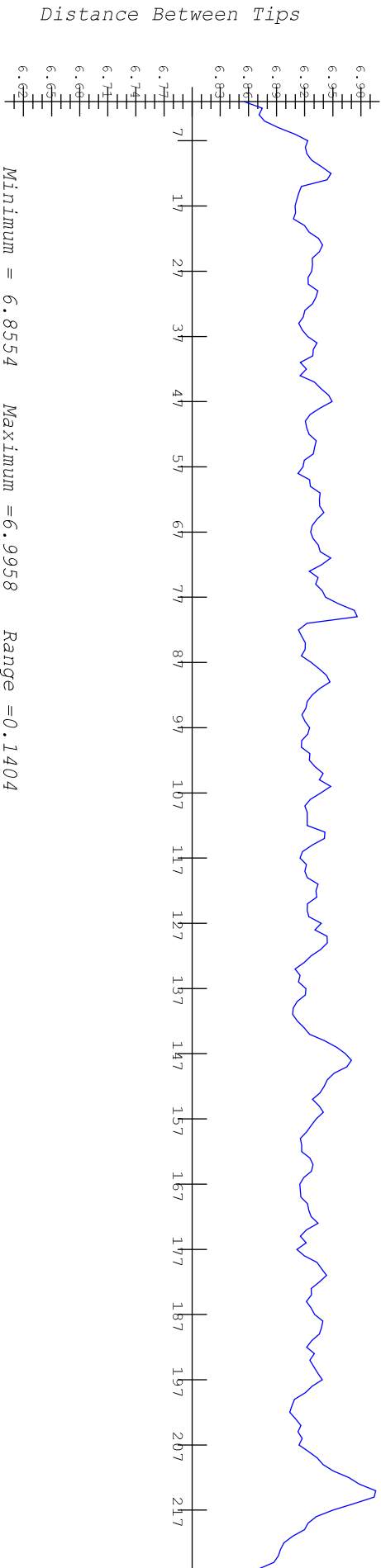


X values in mm

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 = -21.960

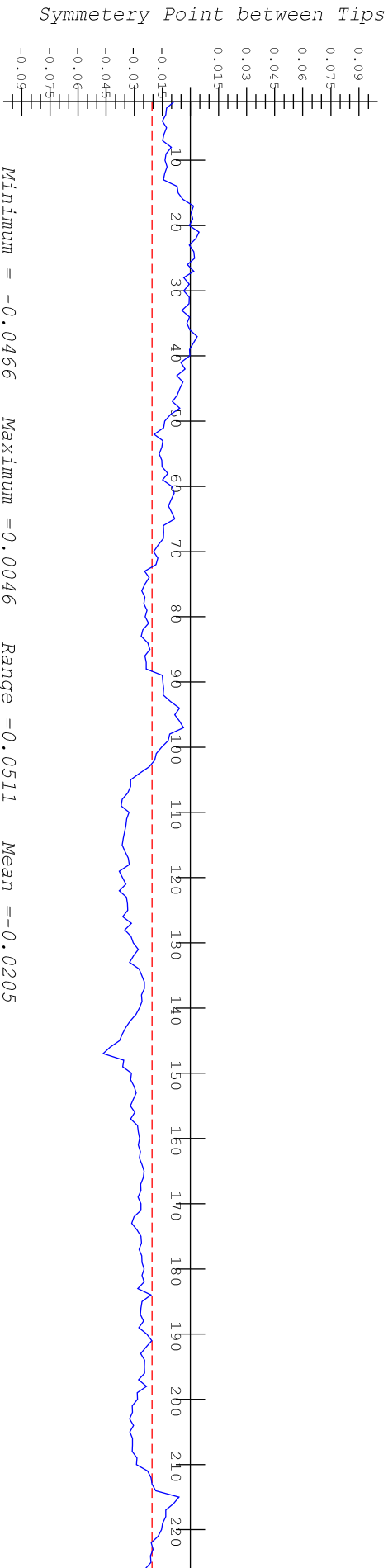
Blue Solid = Point on front face of Lower Pole Tip 10mm below Magnetic C/L
 Blue Dash = Mean value of all Lower Pole Tips 10mm below Magnetic C/L Mean value Lower Pole Tips = -21.942

<p>SLAC LCLS-MMF LEITZ CMM</p>	<p>Undulator Pole Tip Location WITH FLAT FEET - .812mm SHIM US -X</p>	<p>DATE: 02-NOV-2007 UNDULATOR # 39 DATASET # 0001 PROGRAM VERSION 2.3</p>
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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

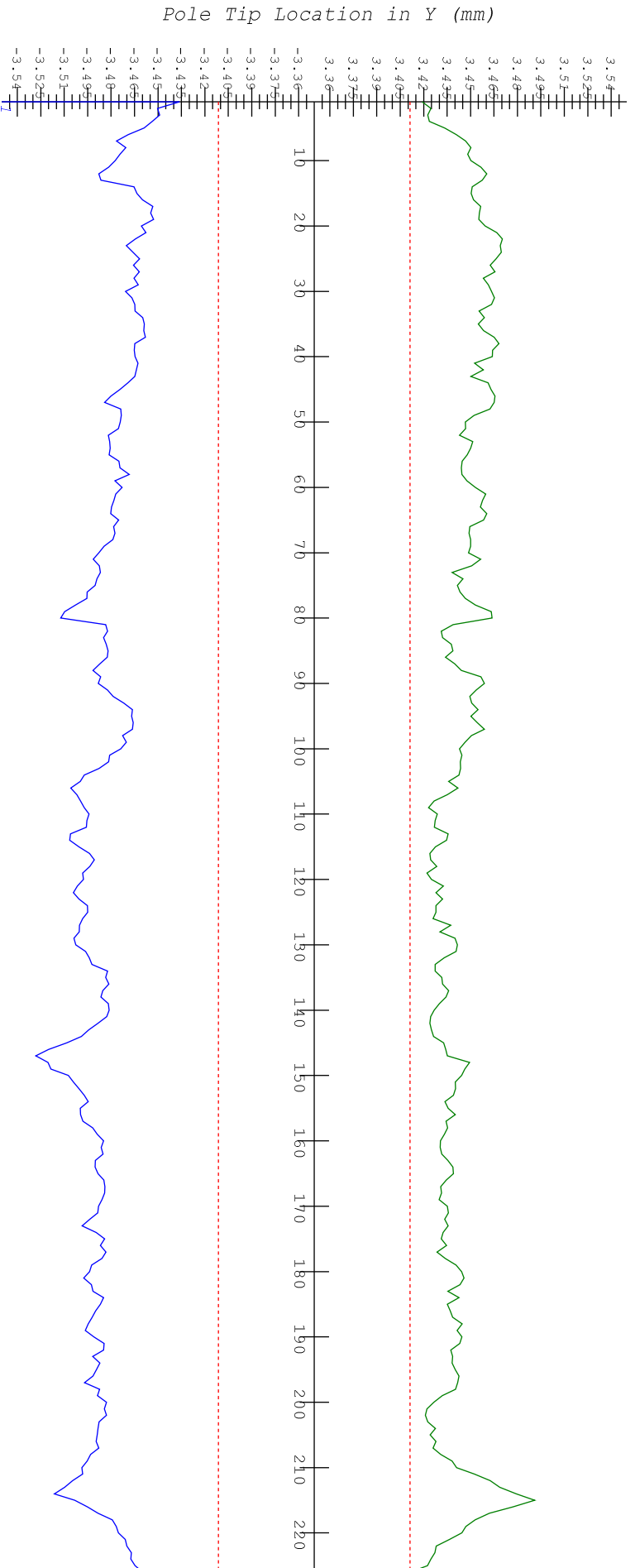
SLAC
 LCLS-MMF
 LEITZ CMM

Undulator Pole Tip Location
 WITH FLAT FEET - .812mm SHIM US -X

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Maximum Chamber Gap = 6.8226

Minimum = 3.4113 Maximum = 3.4911 Range = 0.0798



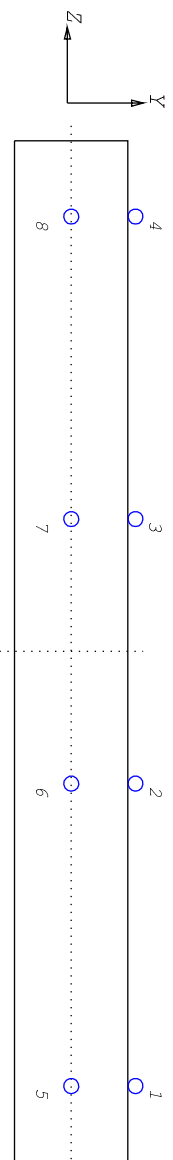
Pole Tip Number ----->

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
WITH FLAT FEET - .812mm SHIM US -X

DATE: 02-NOV-2007
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PROGRAM VERSION 2.3



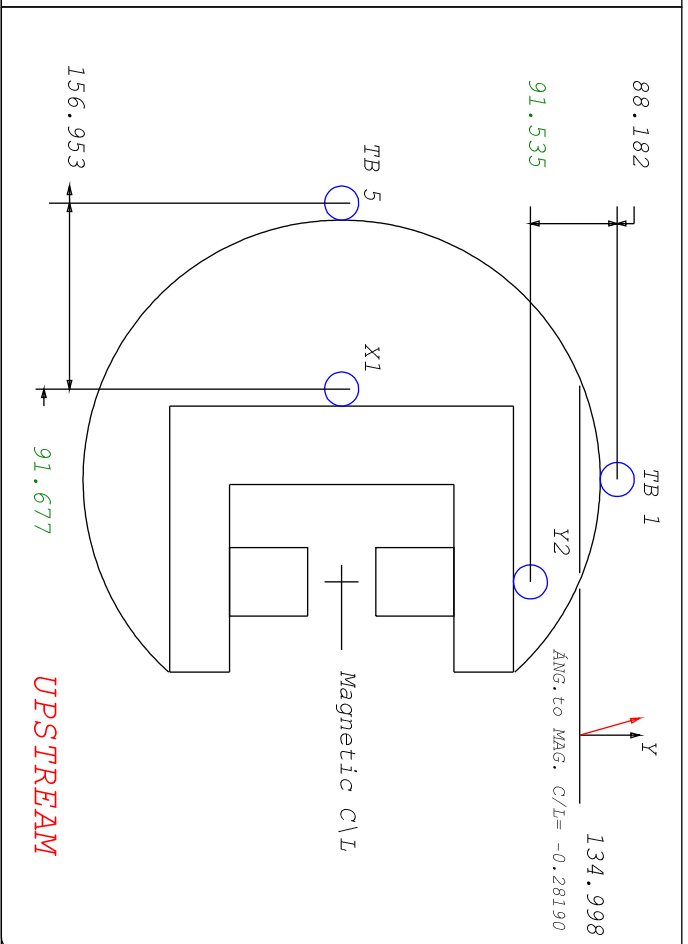
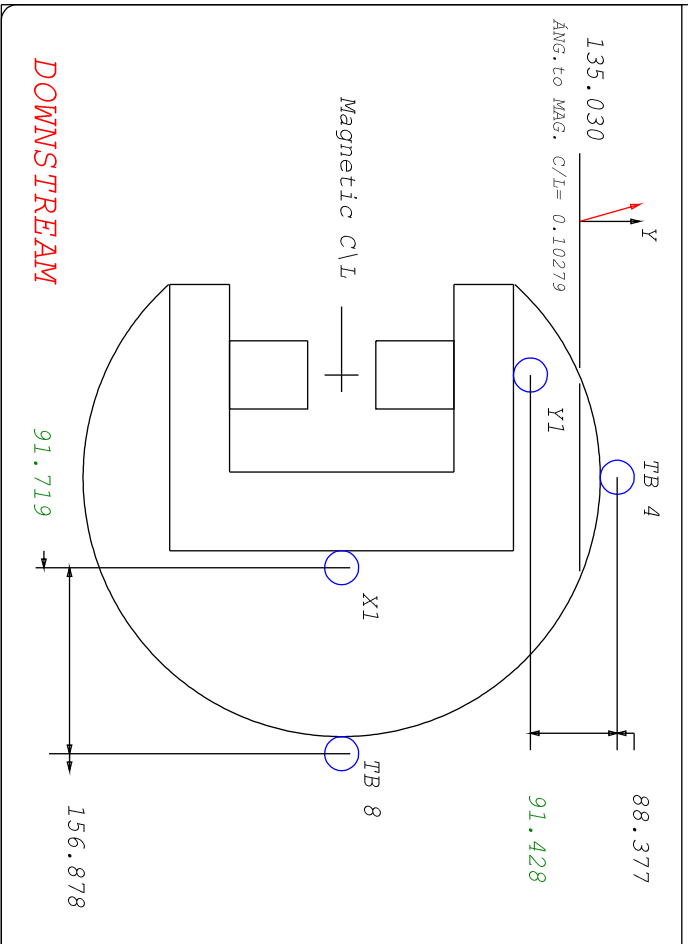
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	0.2588	179.7169	-1558.545
2	0.4067	179.7935	-584.8664
3	0.4332	179.7590	591.1011
4	0.4189	179.8050	1561.9876
5	248.6297	0.1322	-1558.478
6	248.6439	0.0481	-584.8658
7	248.6903	0.0819	591.2002
8	248.5972	0.1209	1561.9816

Top Magnetic Structure C/L Offset Length 3381.216
 Bottom Magnetic Structure 0.002 3381.344
 Strongback 0.143 3399.990

Dimensions in mm

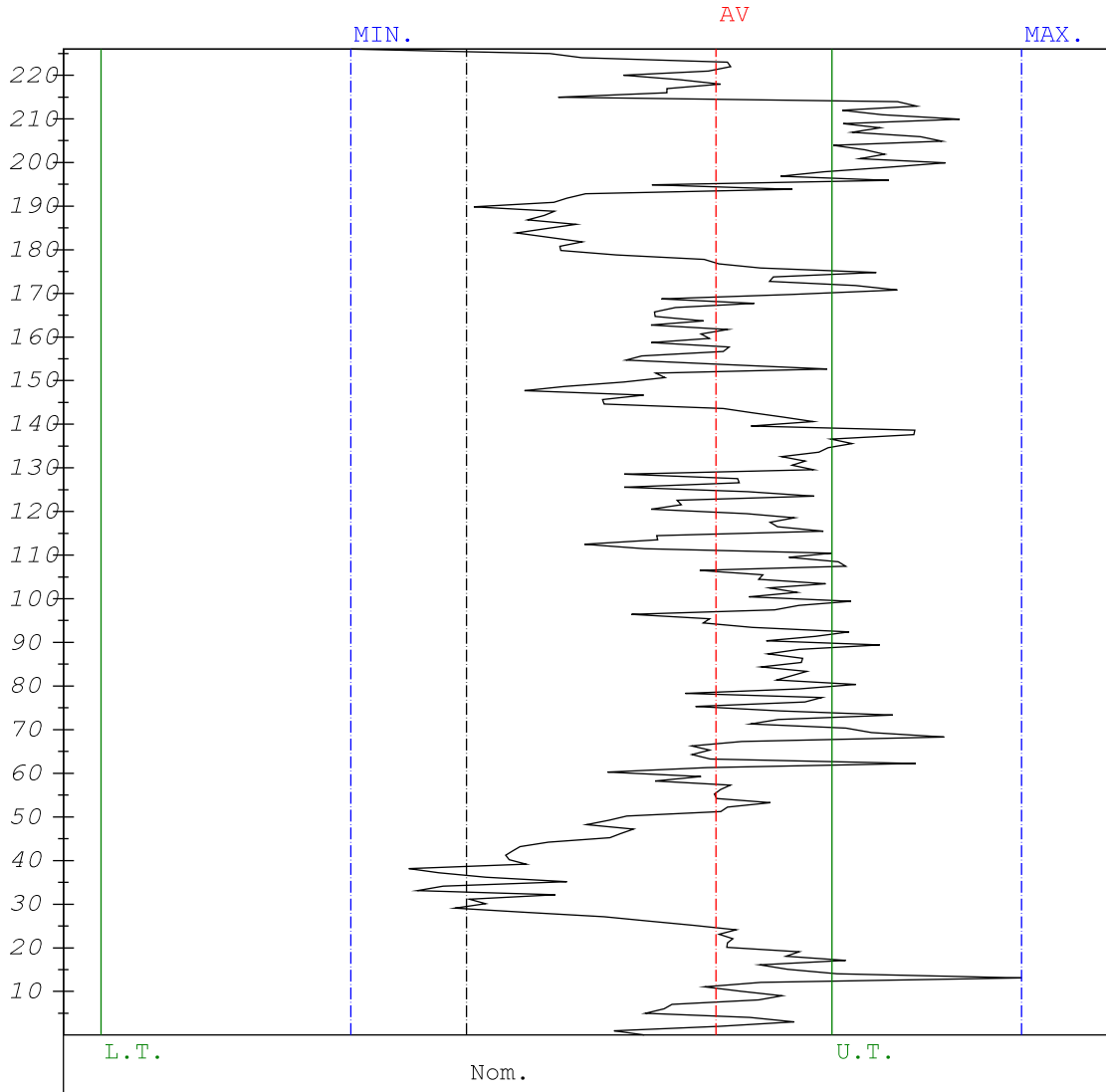
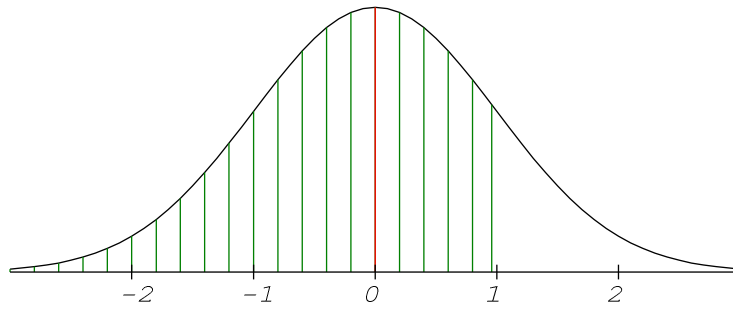
Angles in mrad



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Undulator Dimensional Fiducialization
 WITH FLAT FEET - .812mm SHIM US -X

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Nominal : 4.5000	Averag : 4.8412	Cent.-Dev. : 0.3412
Up. Tol. : 0.5	Maximum : 5.2593	U.Tol.Ex. > : 16.9 %
Low.Tol. : -0.5	Minimum : 4.3419	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.1657	In Tolerance: 83.1 %
Outlier : 0	Distribution : NOR	Dimension : mrad

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Statistical Evaluation
Pole Tip Gap Angle
Post Magnetic Alignment

DATE:02-NOV-2007

UNDULATOR # 39
DATASET # 0001
PROGRAM VERSION 2.3