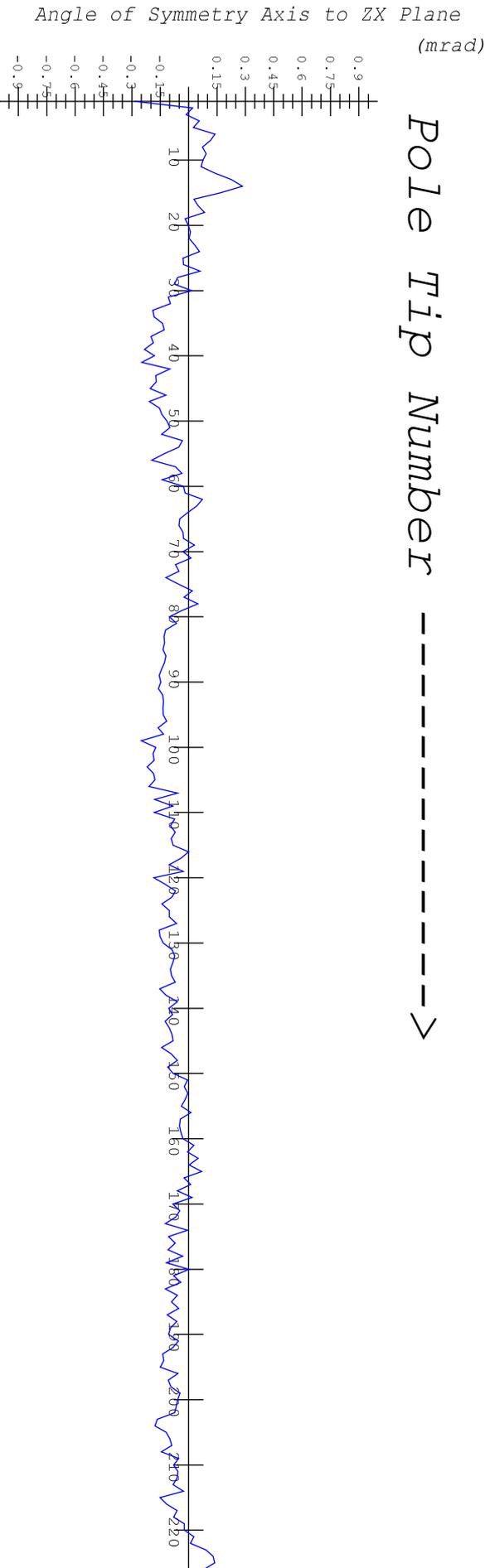


Pole Tip Number ----->



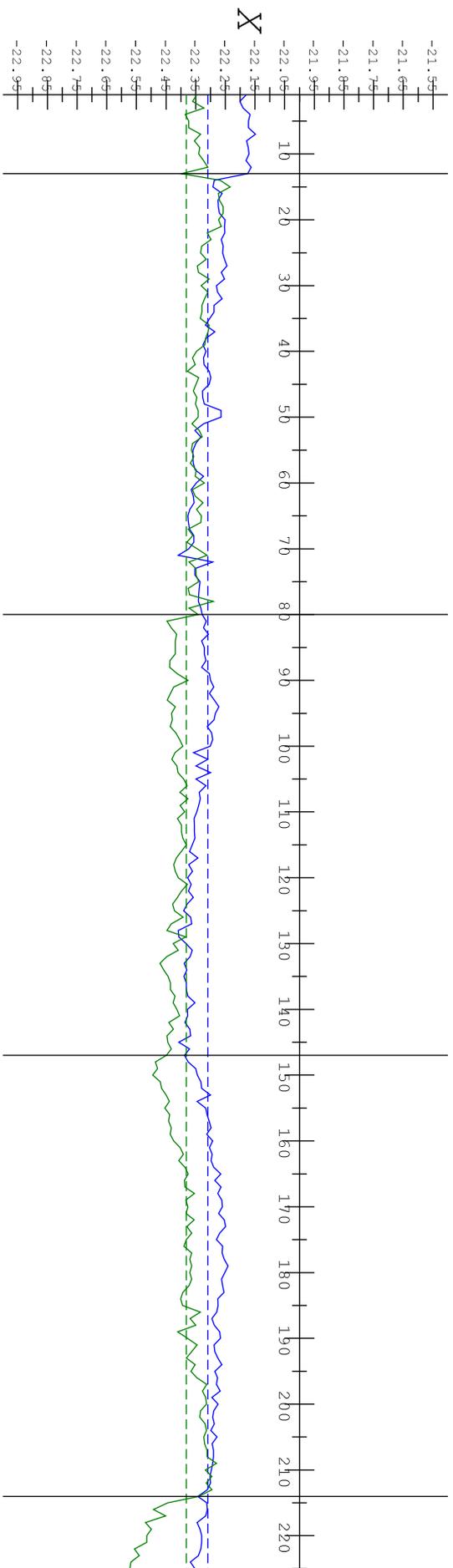
Symmetry Axis is the symmetry axis between the Upper and Lower Pole Tips
 Included Angle is the angle between the Upper and Lower Pole Tips

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Undulator Pole Tip Angles
 Post Magnetic Alignment

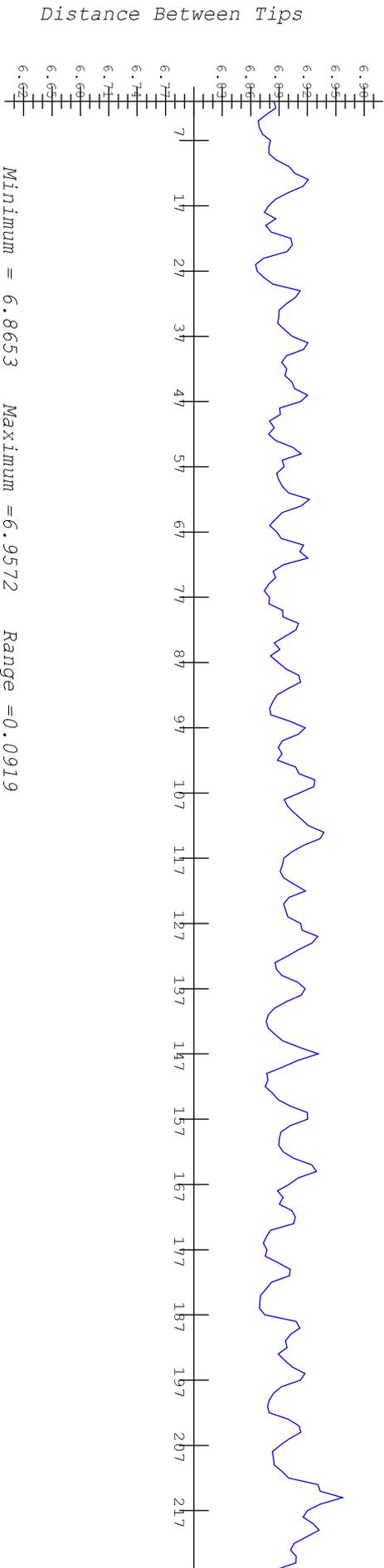
DATE: 30-APR-2007
 UNDUATOR # 11
 VERSION 1.7

Pole Tip Number ----->

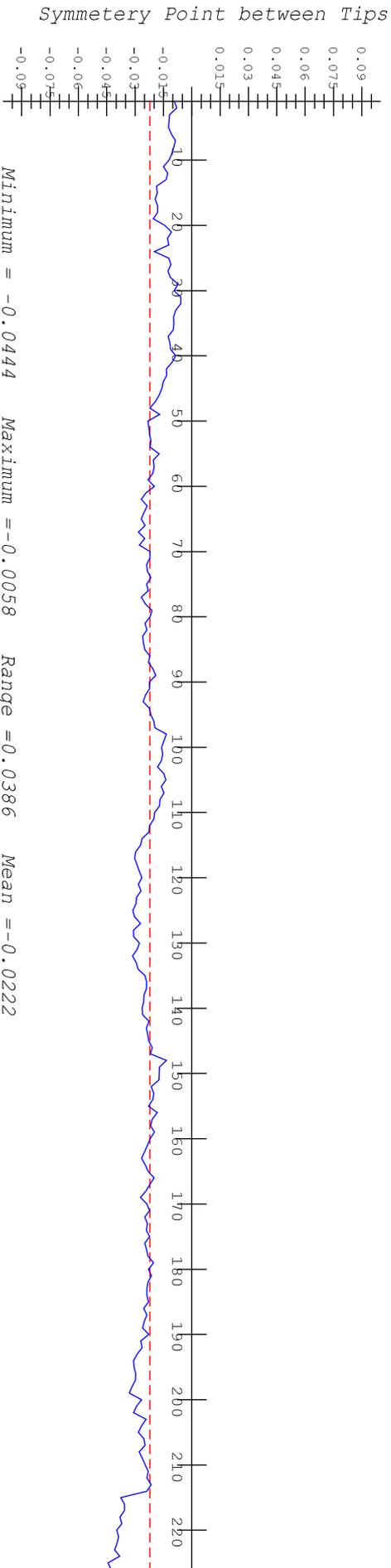


X values in mm
 Green Solid = Point on front face of Upper Pole Tip 10mm above Magnetic C/L
 Green Dash = Mean value of all Upper Pole Tips 10mm above Magnetic C/L Mean value Upper Pole Tips = -22.381
 Blue Solid = Point on front face of Lower Pole Tip 10mm below Magnetic C/L
 Blue Dash = Mean value of all Lower Pole Tips 10mm below Magnetic C/L Mean value Lower Pole Tips = -22.309

<p>SLAC LCLS-MMF LEITZ CMM</p>	<p>Undulator Pole Tip Location Post Magnetic Alignment</p>	<p>DATE: 30-APR-2007 UNDUULATOR # 11 VERSION 1.7</p>
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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

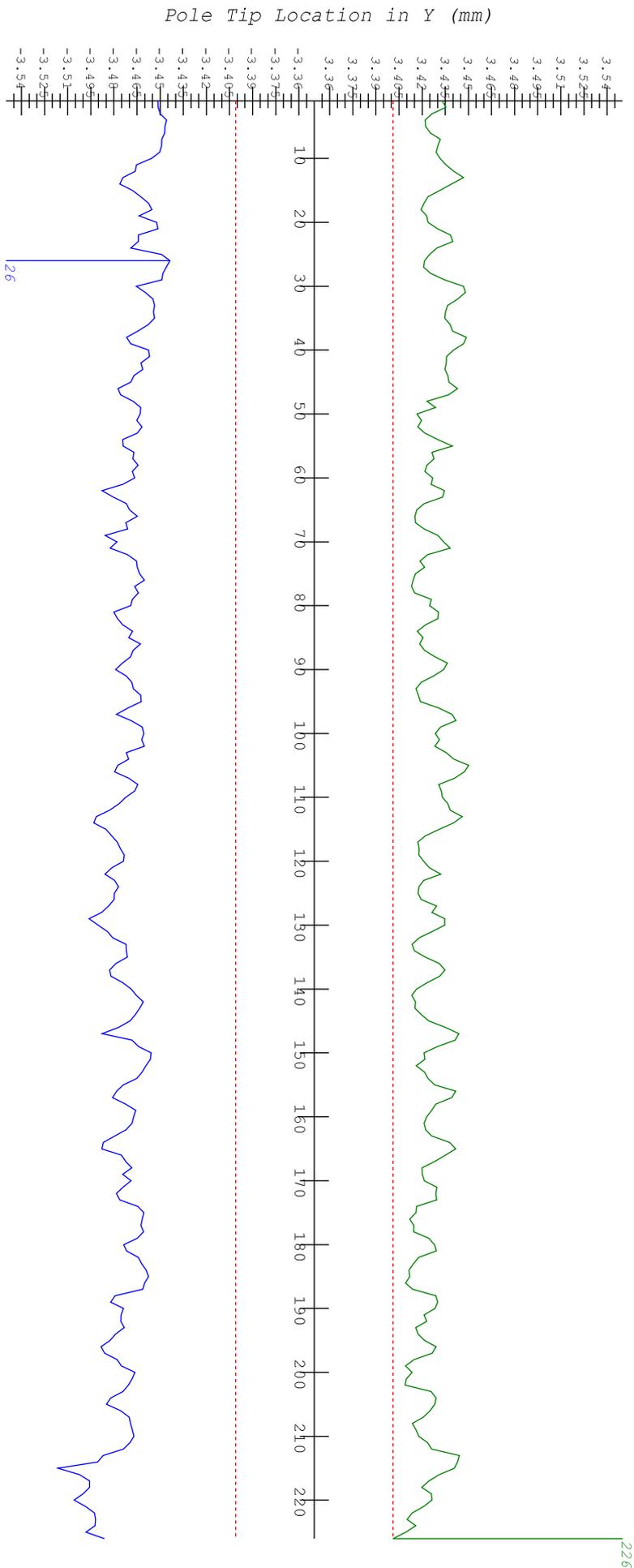
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Undulator Pole Tip Location
 Post Magnetic Alignment

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 UNDUULATOR # 11
 VERSION 1.7

Maximum Chamber Gap = 6.8021

Minimum = 3.4011 Maximum = 3.4502 Range = 0.0491



Minimum = -3.5162 Maximum = -3.4436 Range = 0.0726

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

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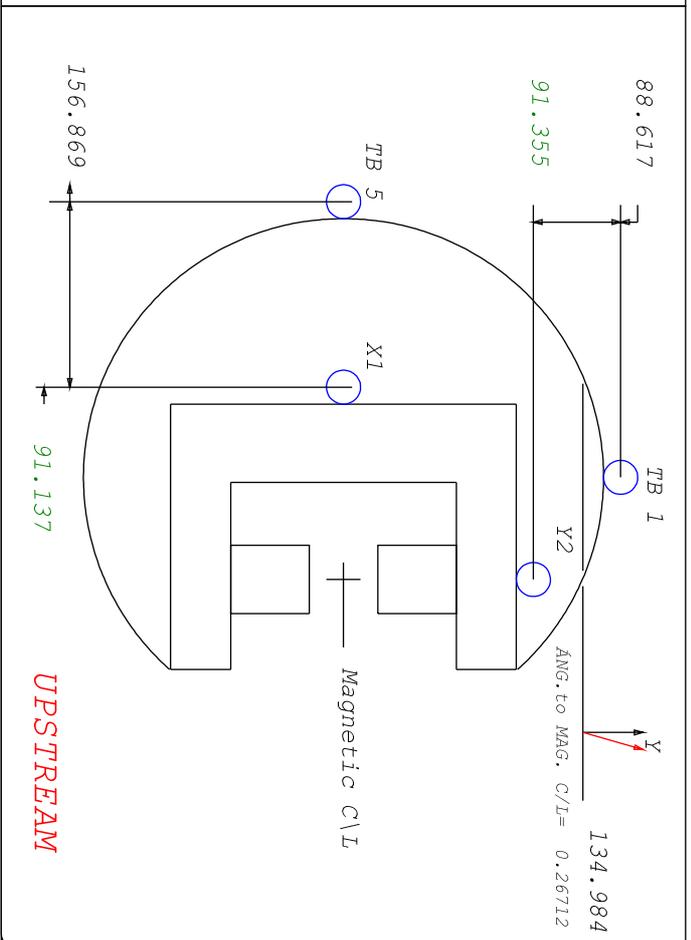
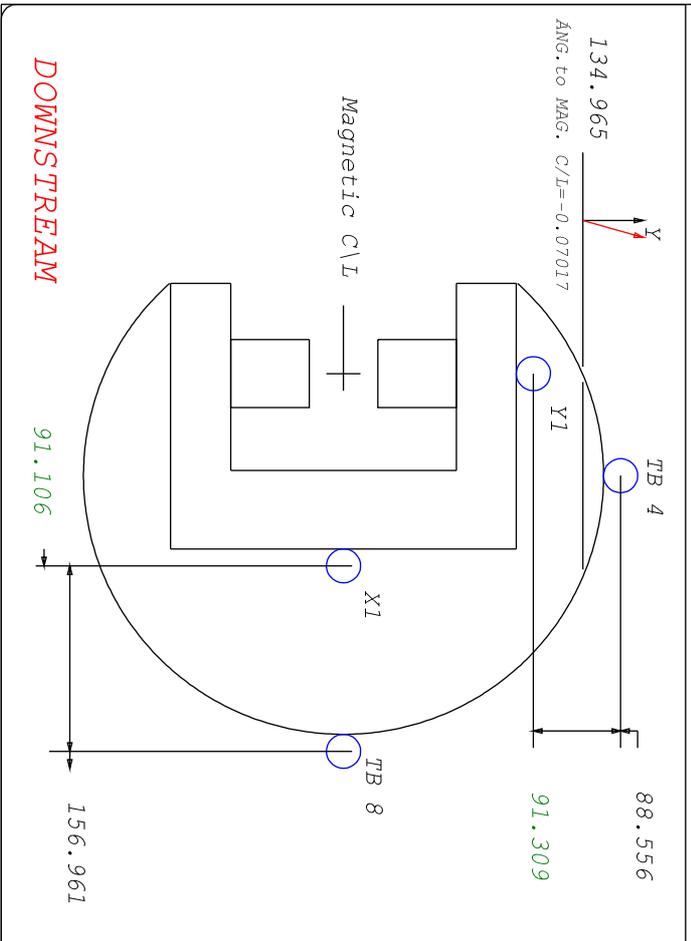
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	-0.1085	179.9721	-1558.341
2	-0.1253	179.8828	-584.7030
3	-0.1404	179.8127	591.2772
4	-0.1381	179.8649	1562.1076
5	248.0055	0.0524	-1558.238
6	248.1278	0.2280	-584.6540
7	248.0654	0.0472	591.3699
8	248.0669	-0.0560	1562.1086

	C/L Offset	Length
Top Magnetic Structure	-0.018	3381.103
Bottom Magnetic Structure	0.018	3381.209
Strongback	0.081	3400.420

Dimensions in mm

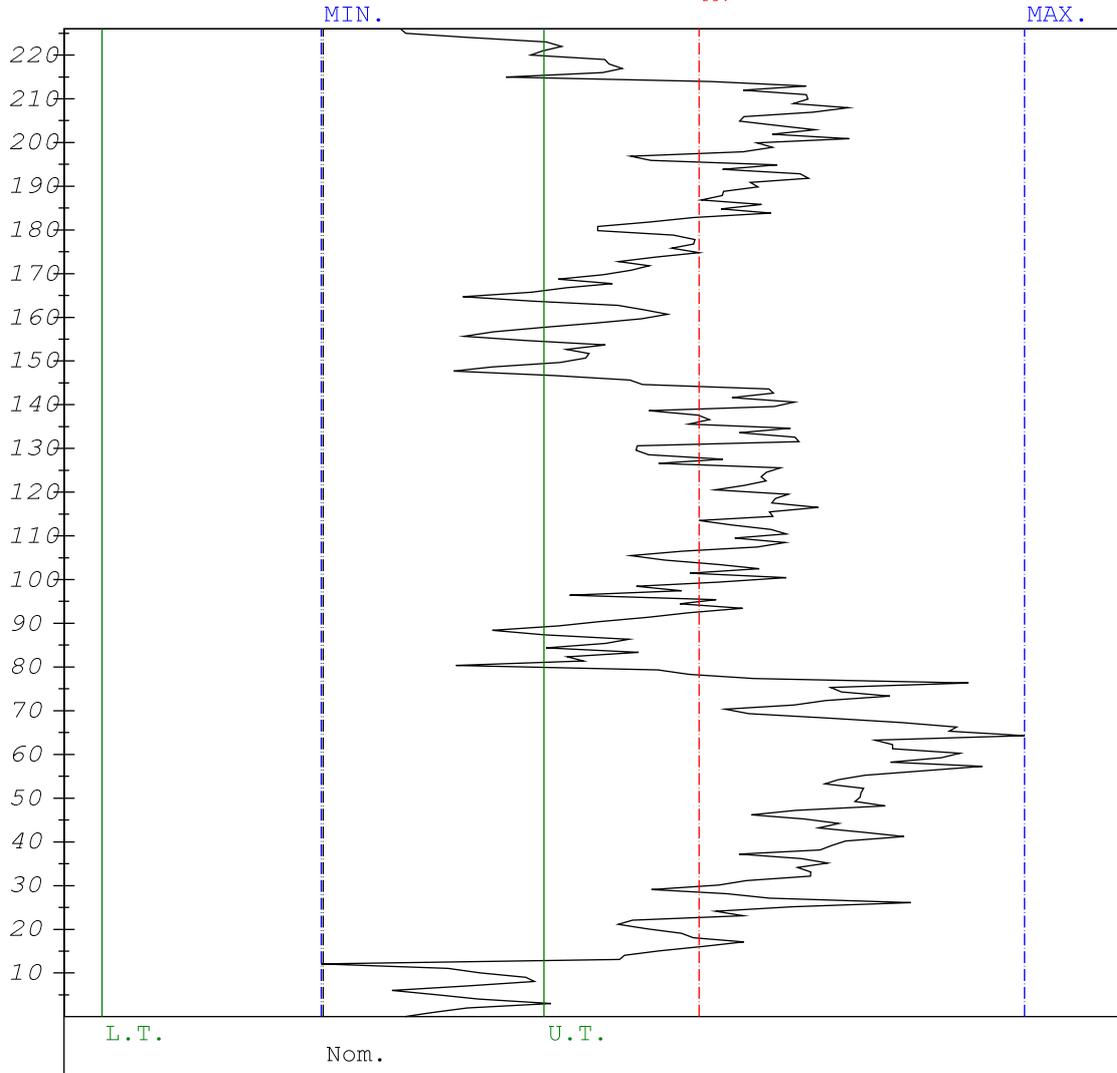
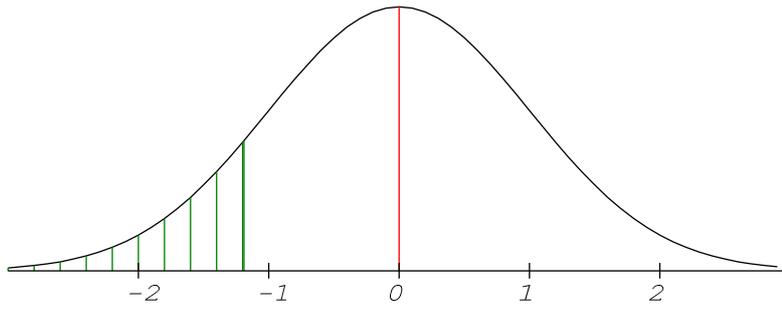
Angles in mrad



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Undulator Dimensional Fiducialization
Post Magnetic Alignment

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VERSION 1.7



Nominal : 4.5000	Averag : 5.3507	Cent.-Dev. : 0.8507
Up. Tol. : 0.5	Maximum : 6.0867	U.Tol.Ex. > : 88.3 %
Low.Tol. : -0.5	Minimum : 4.4961	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.2949	In Tolerance: 11.7 %
Outlier : 0	Distribution : NOR	Dimension : mrad

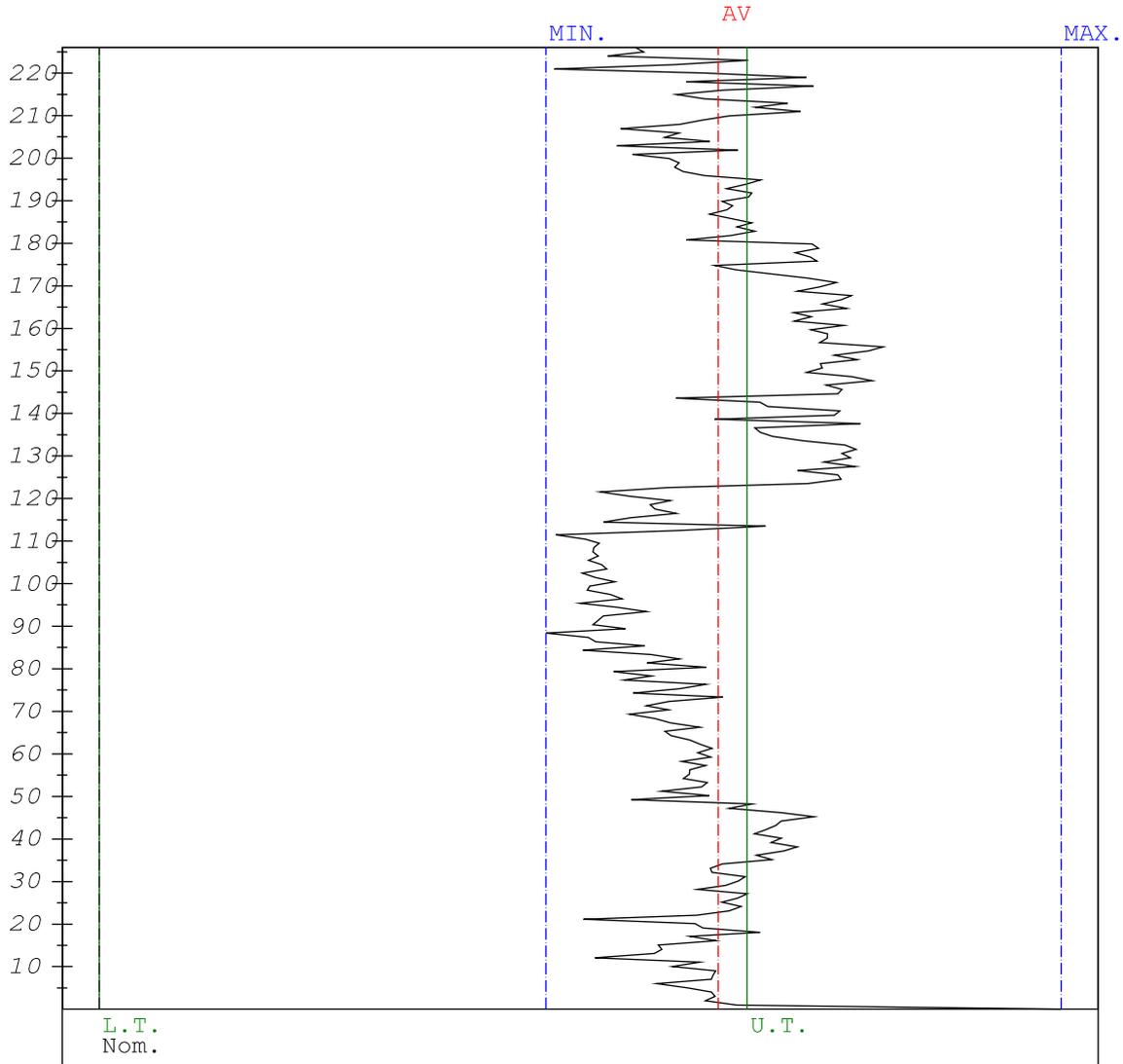
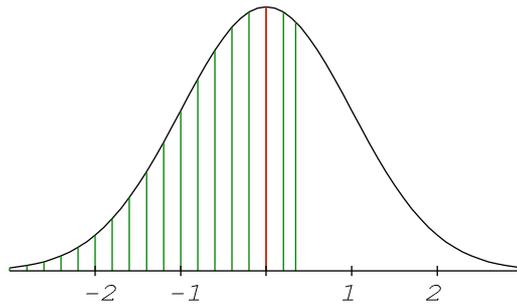
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LEITZ CMM

Statistical Evaluation
Pole Tip Gap Angle
Post Magnetic Alignment

DATE: 30-APR-2007

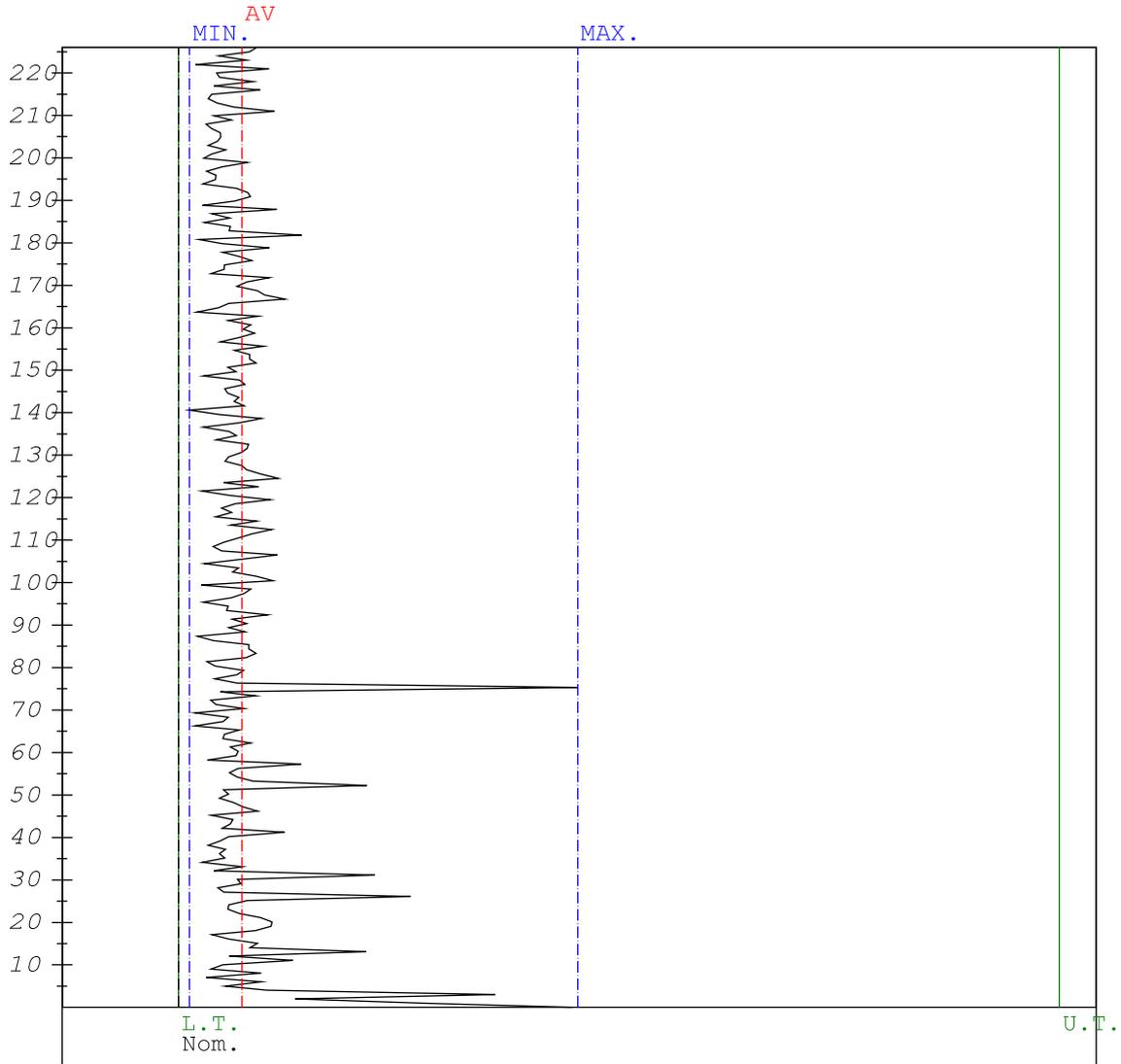
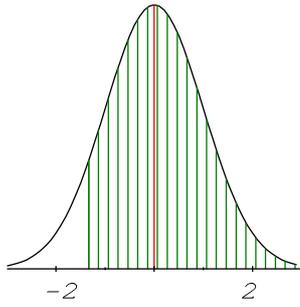
UNDULATOR # 11

VERSION 1.7



Nominal : 0.0000	Averag : 0.0143	Cent.-Dev. : 0.0068
Up. Tol. : 0.015	Maximum : 0.0223	U.Tol.Ex. > : 36.6 %
Low.Tol. : 0	Minimum : 0.0103	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.0019	In Tolerance: 63.4 %
Outlier : 0	Distribution : NOR	Dimension : mm

<p>SLAC LCLS-MMF LEITZ CMM</p>	<p>Statistical Evaluation Top Pole Tip Form Post Magnetic Alignment</p>	<p>DATE: 30-APR-2007 UNDULATOR # 11 VERSION 1.7</p>
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Nominal : 0.0000	Averag : 0.0011	Cent.-Dev. :-0.0064
Up. Tol. : 0.015	Maximum : 0.0068	U.Tol.Ex. > : 0.0 %
Low.Tol. : 0	Minimum : 0.0002	L.Tol.Ex. < : 9.1 %
Spl.Size : 226	Stand.-Dev.: 0.0008	In Tolerance: 90.9 %
Outlier : 0	Distribution : NOR	Dimension : mm

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LEITZ CMM

Statistical Evaluation
Bottom Pole Tip Form
Post Magnetic Alignment

DATE: 30-APR-2007

UNDULATOR # 11

VERSION 1.7