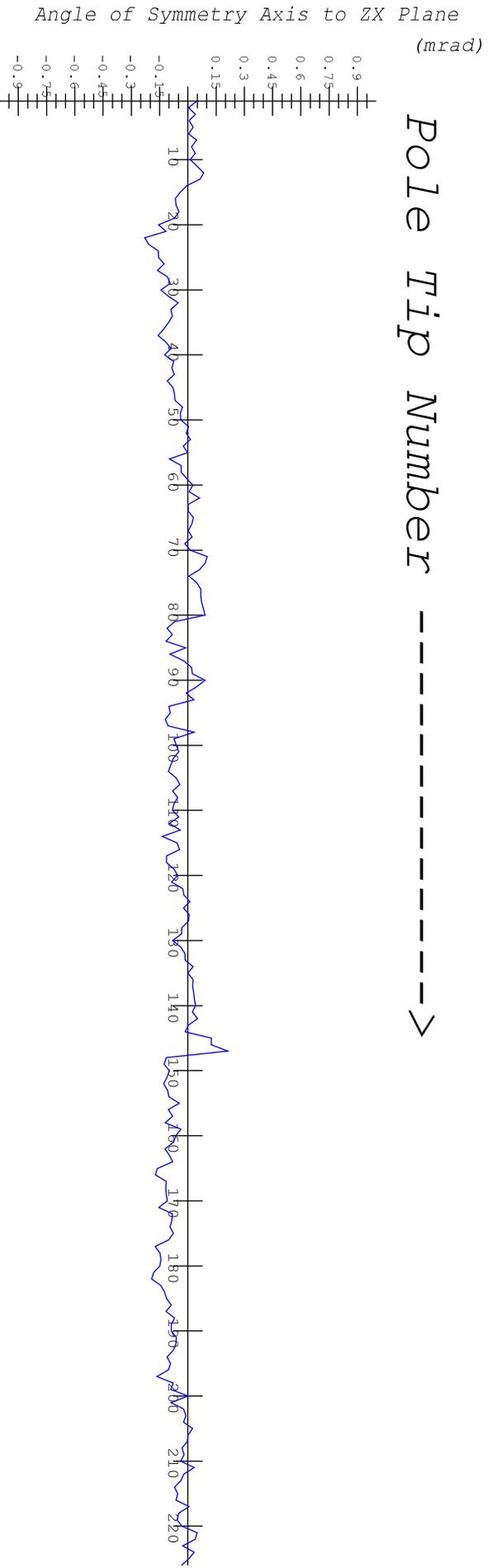


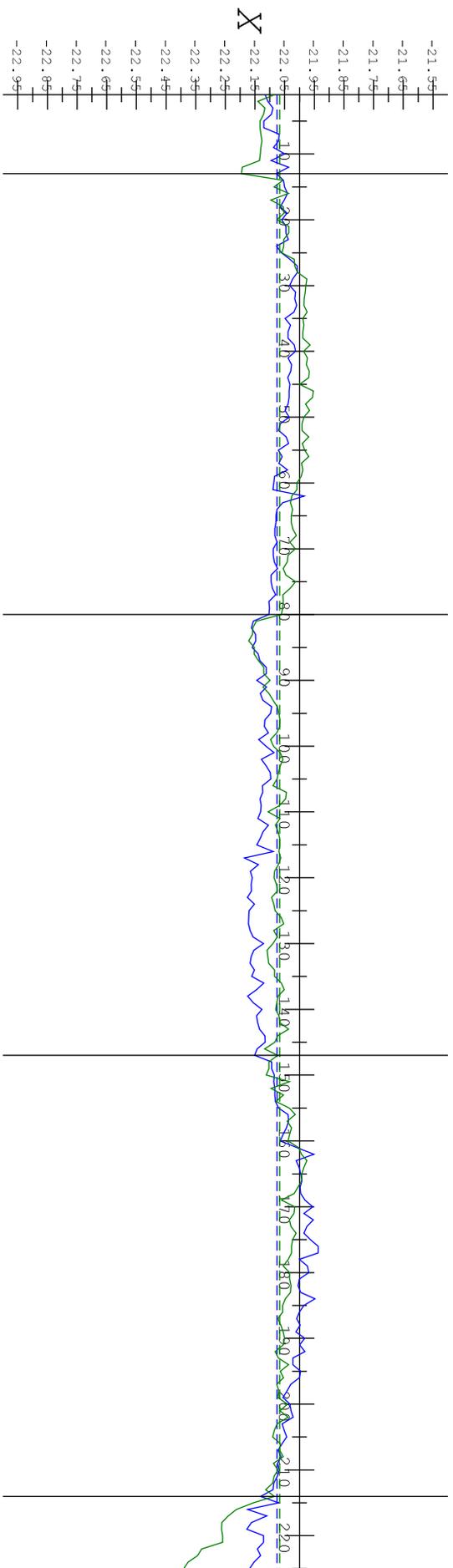
Pole Tip Number ----->



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: 27-JUL-2007 UNDULATOR # 13 DATASET # 0002 PROGRAM VERSION 2.1</p>
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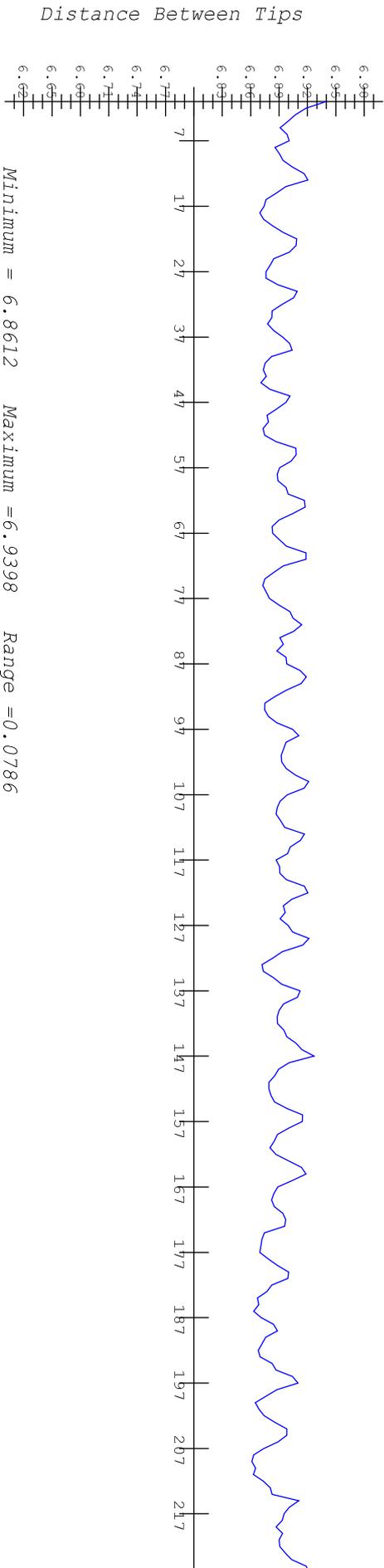
Pole Tip Number ----->



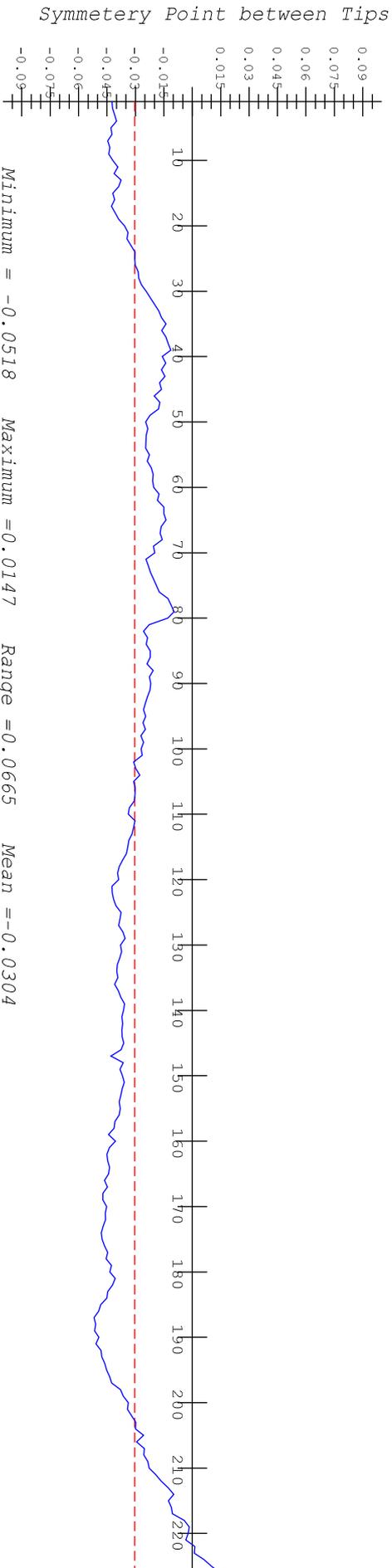
SLAC
 LCLS-MMF
 LEITZ CMM

Undulator Pole Tip Location
 Post Magnetic Alignment

DATE: 27-JUL-2007
 UNDUULATOR # 13
 DATASET # 0002
 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

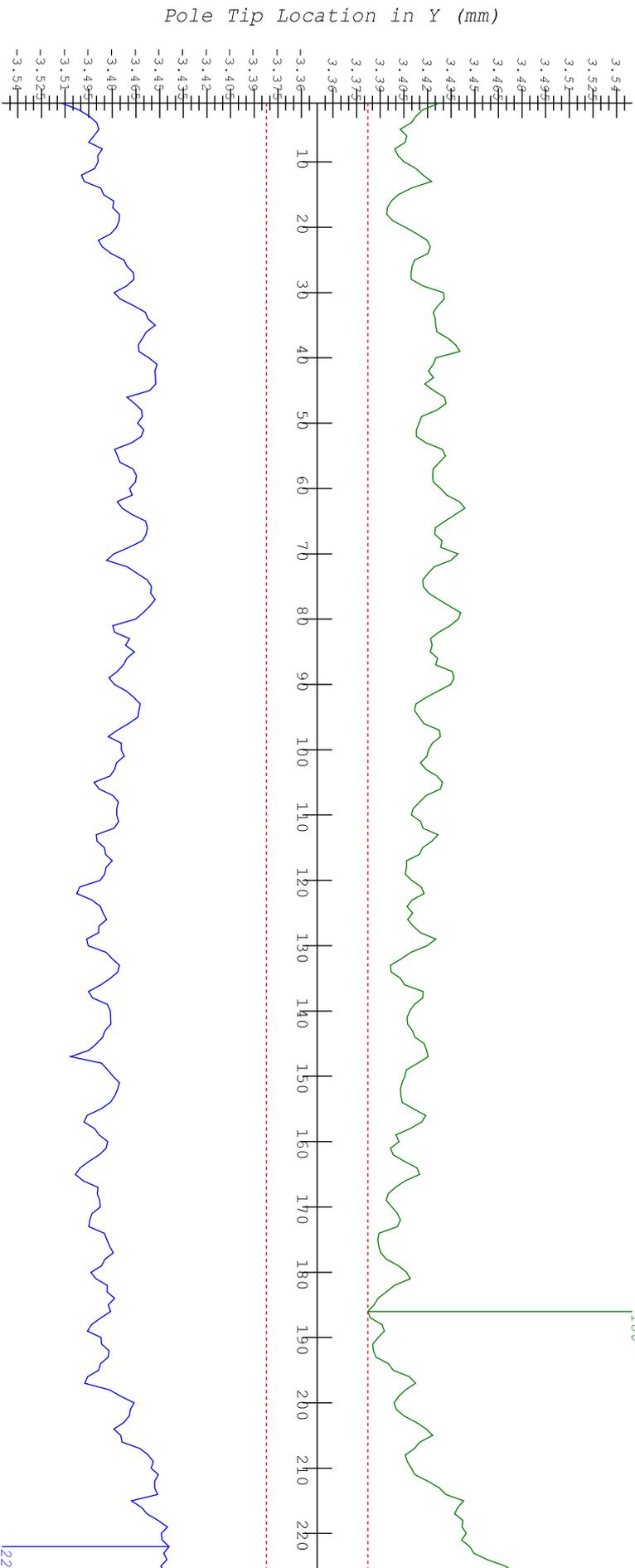
SLAC
 LCLS-MMF
 LEITZ CMM

Undulator Pole Tip Location
 Post Magnetic Alignment

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 DATASET # 0002
 PROGRAM VERSION 2.1

Maximum Chamber Gap = 6.7644

Minimum = 3.3822 Maximum = 3.4755 Range = 0.0933



Minimum = -3.5123 Maximum = -3.4441 Range = 0.0682

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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UNDULATOR # 13
DATASET # 0002
PROGRAM VERSION 2.1



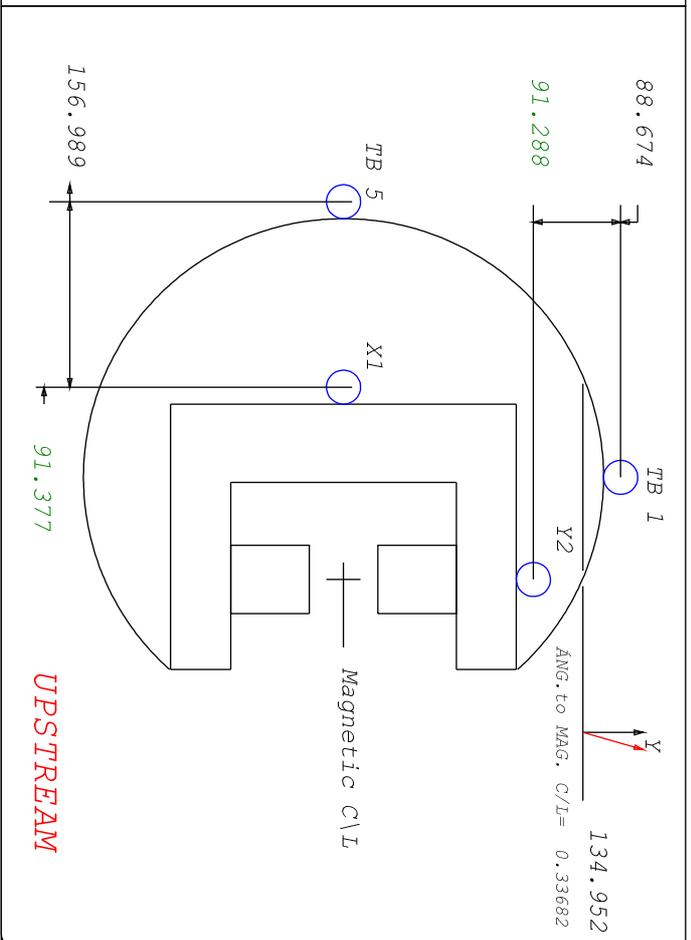
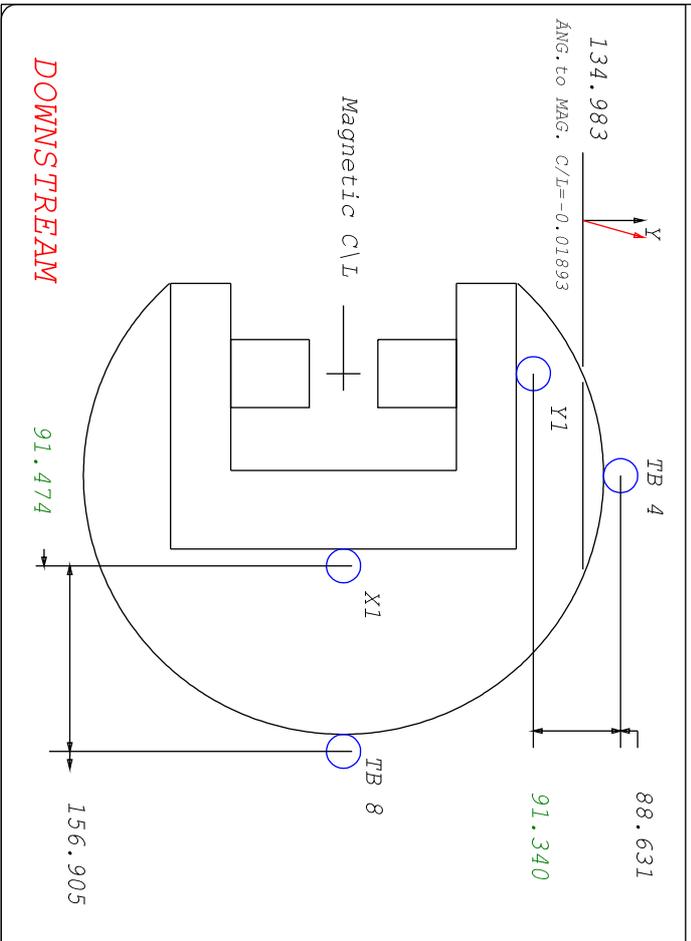
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	0.0419	179.9617	-1558.294
2	0.1730	179.9845	-584.4597
3	0.0594	179.8756	591.3070
4	0.0221	179.9707	1562.0860
5	248.3661	0.0438	-1558.346
6	248.3132	-0.0567	-584.6026
7	248.3272	0.0137	591.3290
8	248.3791	-0.0920	1562.0925

	C/L Offset	Length
Top Magnetic Structure	-0.096	3381.081
Bottom Magnetic Structure	0.096	3381.306
Strongback	0.267	3399.801

Dimensions in mm

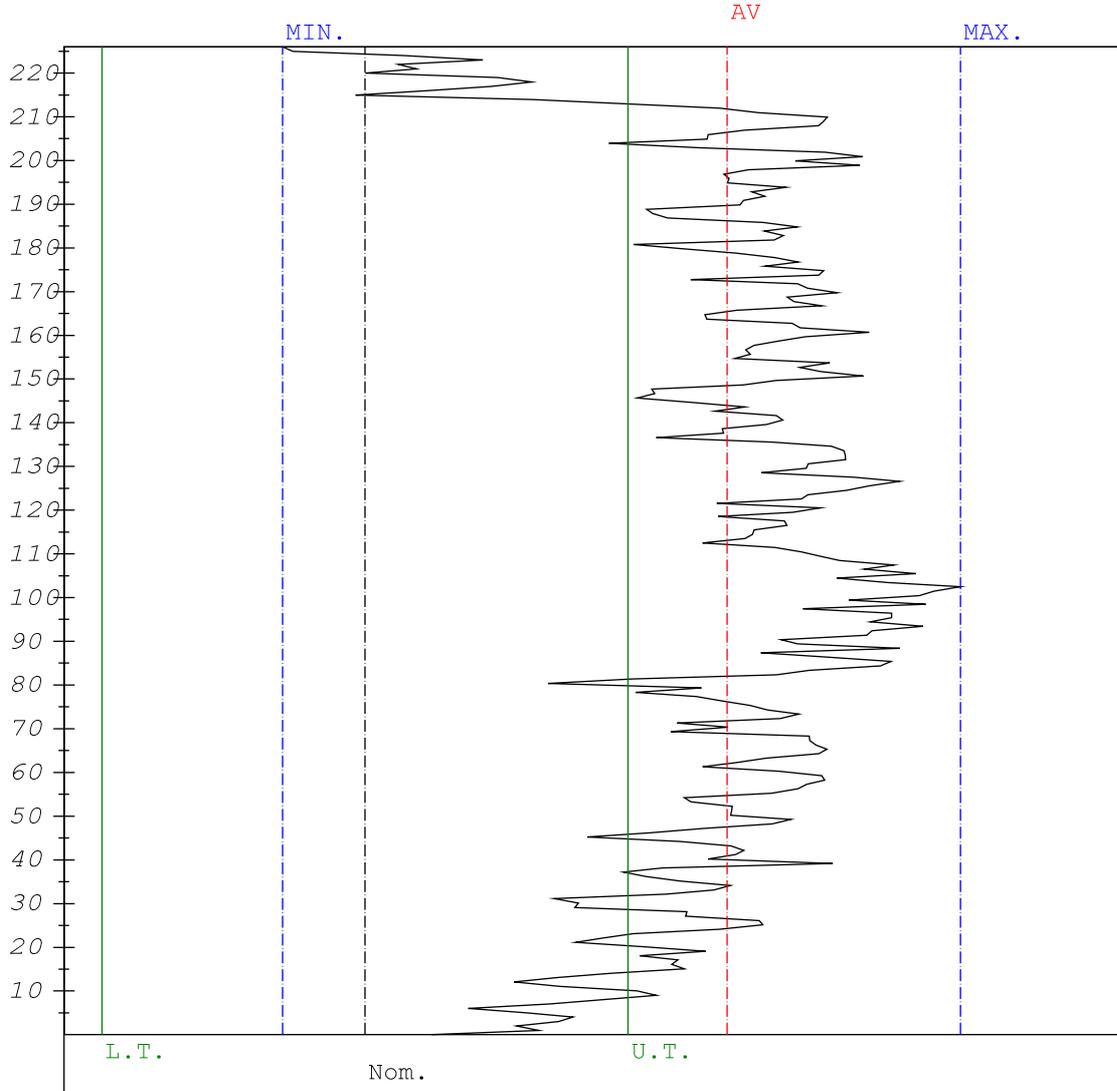
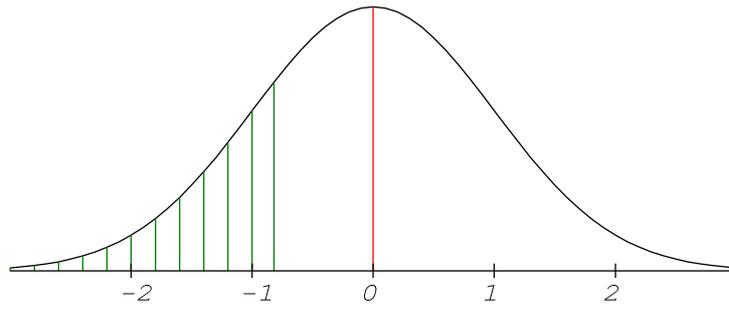
Angles in mrad



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Undulator Dimensional Fiducialization
Post Magnetic Alignment

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DATASET # 0002
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Nominal : 4.5000	Averag : 5.1888	Cent.-Dev. : 0.6888
Up. Tol. : 0.5	Maximum : 5.6321	U.Tol.Ex. > : 79.4 %
Low.Tol. : -0.5	Minimum : 4.3434	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.2301	In Tolerance: 20.6 %
Outlier : 0	Distribution : NOR	Dimension : mrad

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LCLS-MMF
LEITZ CMM

Statistical Evaluation
Pole Tip Gap Angle
Post Magnetic Alignment

DATE: 27-JUL-2007

UNDULATOR # 13
DATASET # 0002

PROGRAM VERSION 2.1