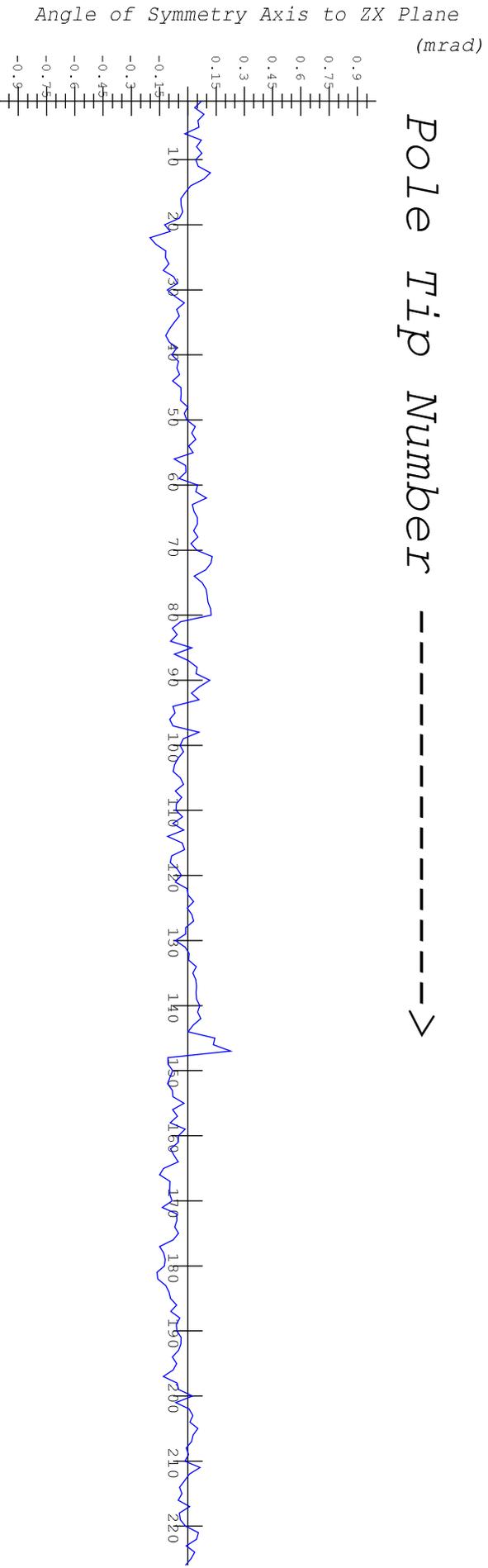


Pole Tip Number ----->



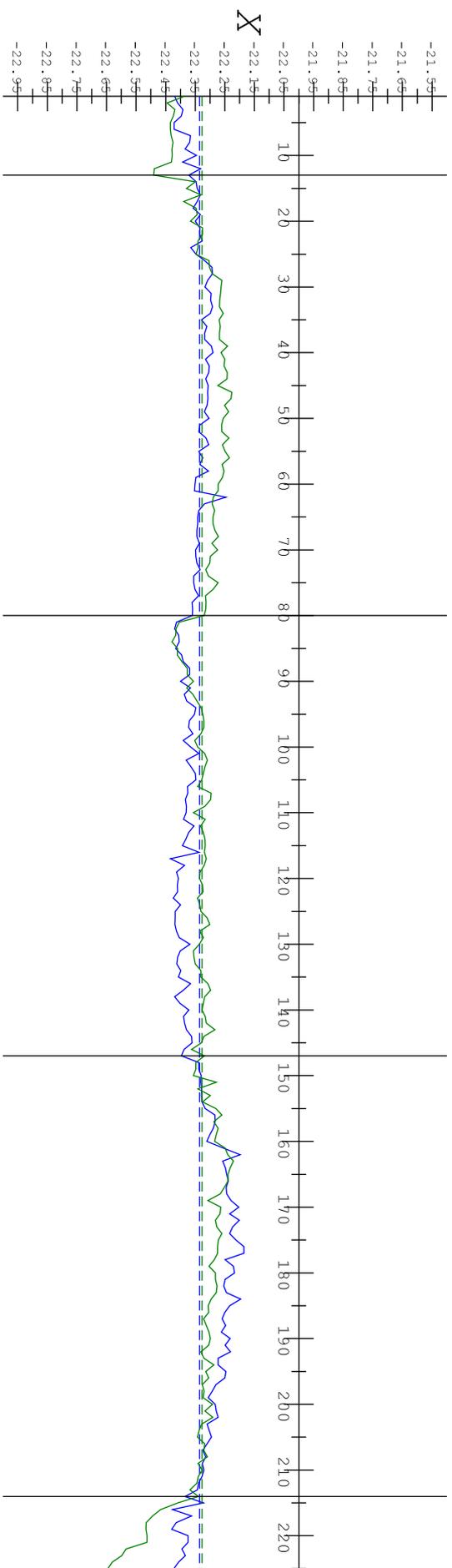
Symmetry Axis is the symmetry axis between the Upper and Lower Pole Tips  
 Included Angle is the angle between the Upper and Lower Pole Tips



Undulator Pole Tip Angles  
 Post Magnetic Alignment

DATE: 31-MAY-2011  
 UNDULATOR # 13  
 DATASET # 0036  
 PROGRAM VERSION 2.9

# 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 = -22.327

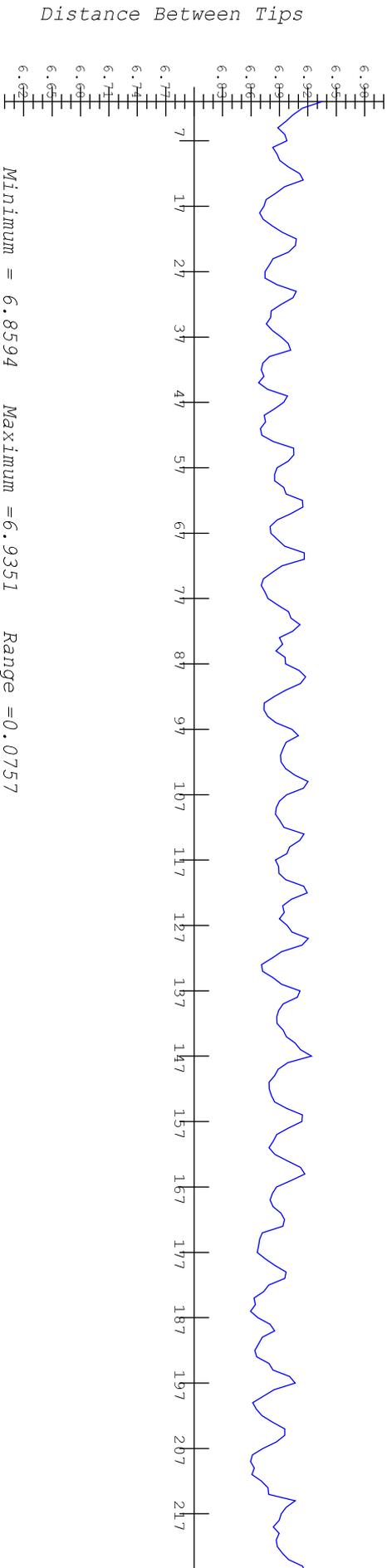
Blue Solid = Point on front face of Lower Pole Tip 10mm below Magnetic C/L

Blue Dash = Mean value of all Lower Pole Tips 10mm below Magnetic C/L Mean value Lower Pole Tips = -22.335

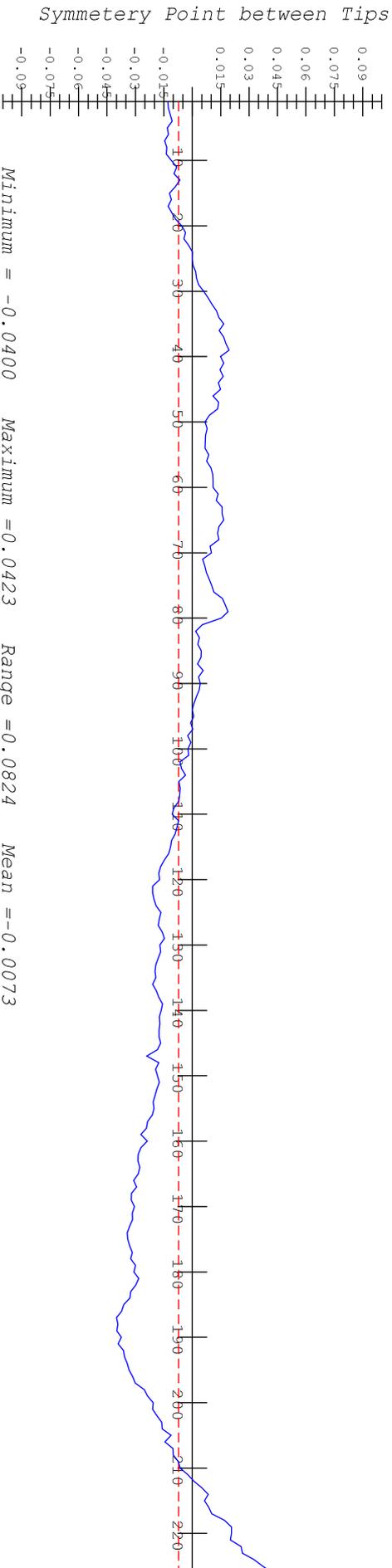


## Undulator Pole Tip Location Post Magnetic Alignment

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PROGRAM VERSION 2.9



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

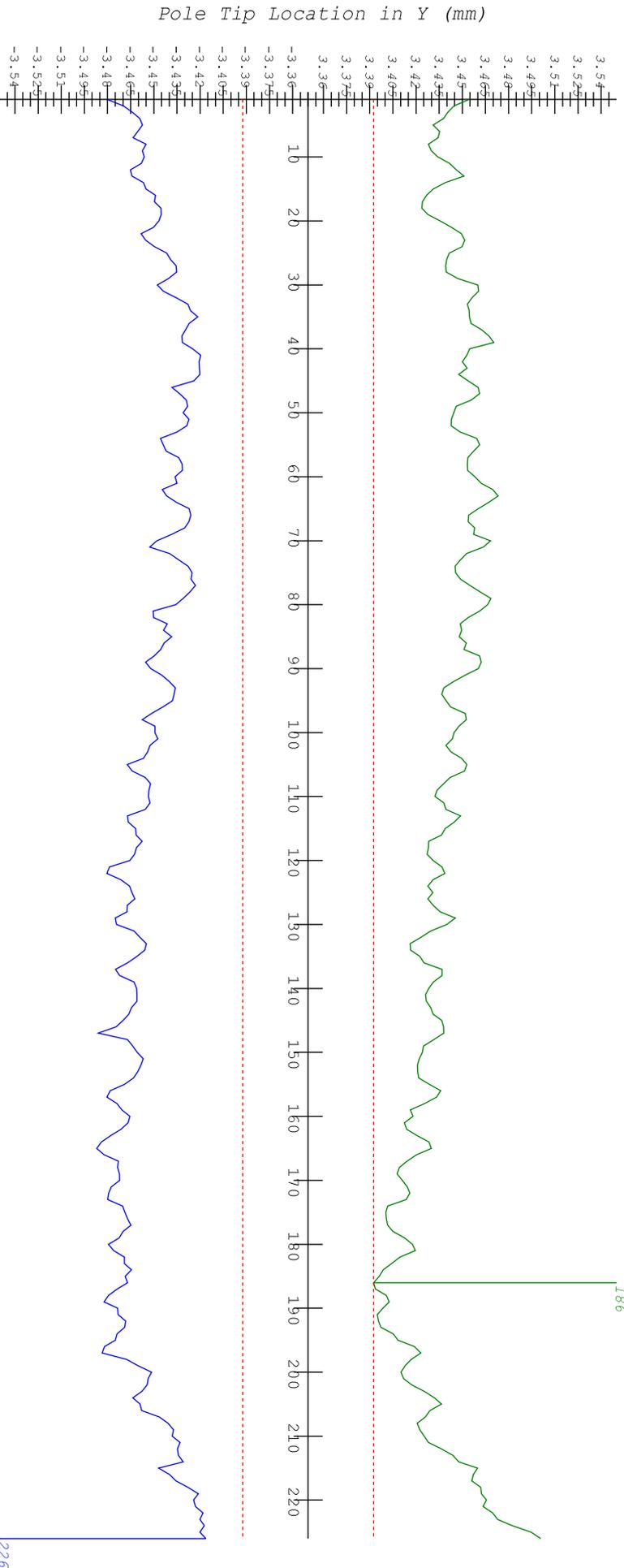


Undulator Pole Tip Location  
 Post Magnetic Alignment

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 DATASET # 0036  
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Maximum Chamber Gap = 6.7849

Minimum = 3.3924    Maximum = 3.5009    Range = 0.1085



Minimum = -3.4871    Maximum = -3.4162    Range = 0.0708

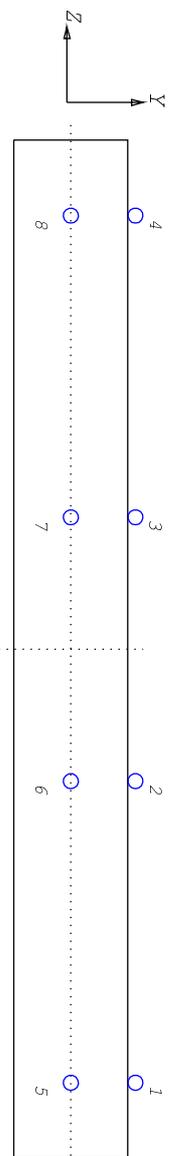
Pole Tip Number ----->

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)



Undulator Pole Tip Location  
Post Magnetic Alignment

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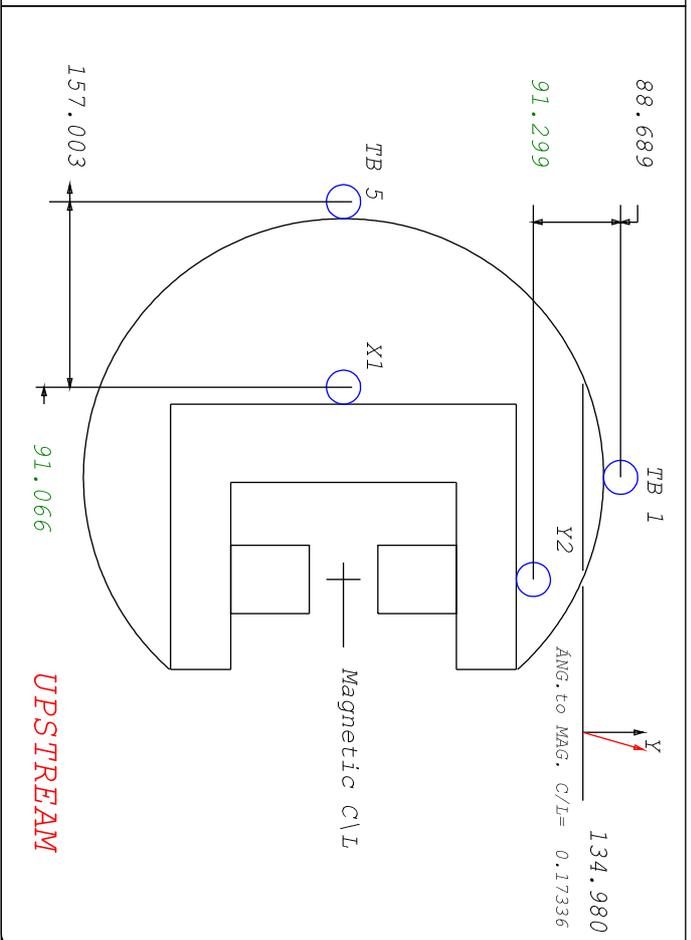
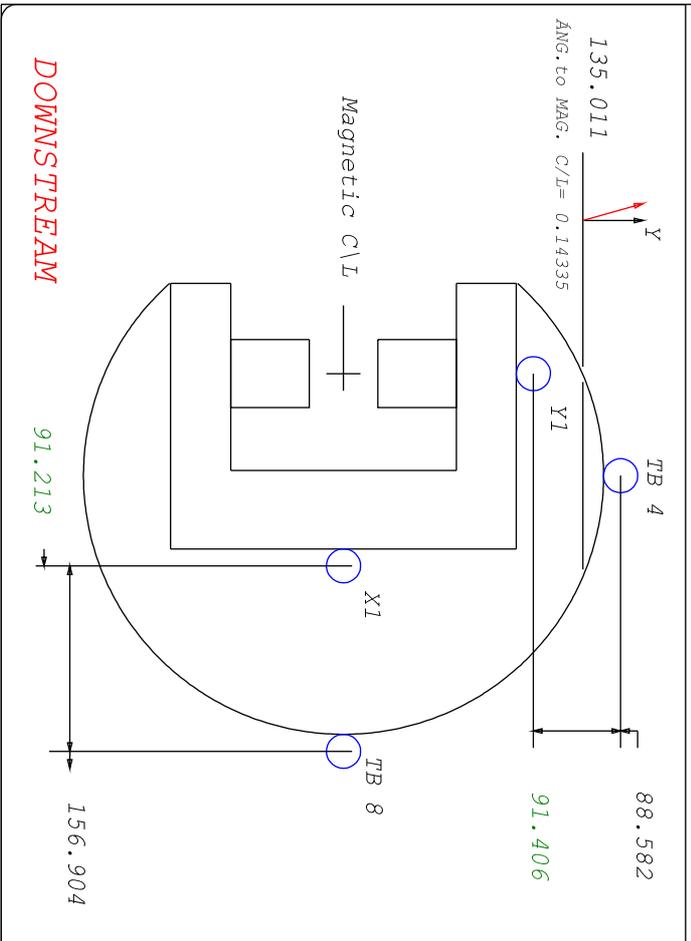
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	-0.2645	179.9883	-1558.284
2	-0.0925	180.0117	-584.4533
3	-0.1911	179.8903	591.3047
4	-0.2409	179.9881	1562.0692
5	248.0693	0.0772	-1558.358
6	248.0498	-0.0253	-584.6008
7	248.0754	0.0363	591.3269
8	248.1174	-0.0675	1562.0860

	C/L Offset	Length
Top Magnetic Structure	-0.096	3381.046
Bottom Magnetic Structure	0.096	3381.272
Strongback	0.249	3399.771

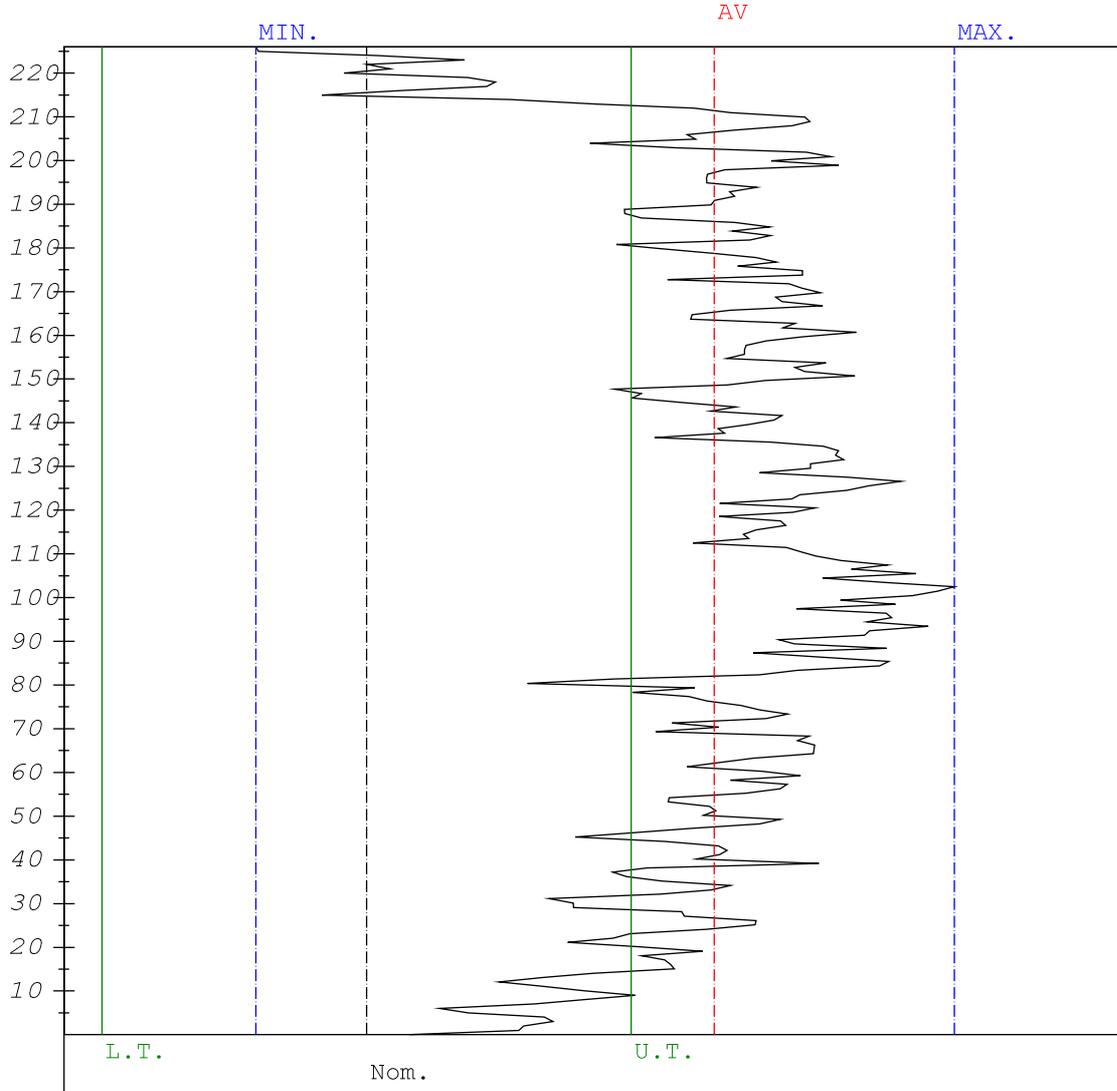
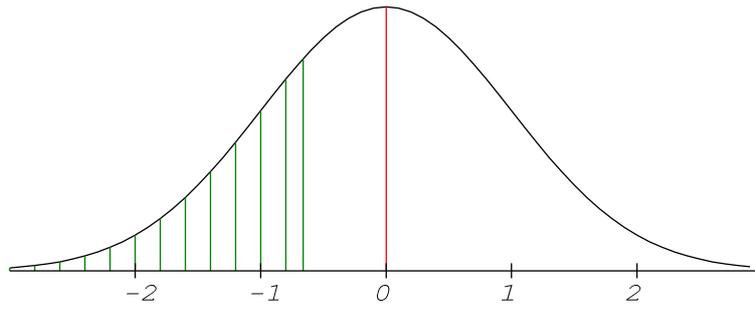
Dimensions in mm

Angles in mrad



# Undulator Dimensional Fiducialization Post Magnetic Alignment

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PROGRAM VERSION 2.9



Nominal : 4.5000	Averag : 5.157	Cent.-Dev. : 0.657
Up. Tol. : 0.5	Maximum : 5.6114	U.Tol.Ex. > : 74.6 %
Low.Tol. : -0.5	Minimum : 4.2908	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.2371	In Tolerance: 25.4 %
Outlier : 0	Distribution : NOR	Dimension : mrad



Statistical Evaluation  
Pole Tip Gap Angle  
Post Magnetic Alignment

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PROGRAM VERSION 2.9