

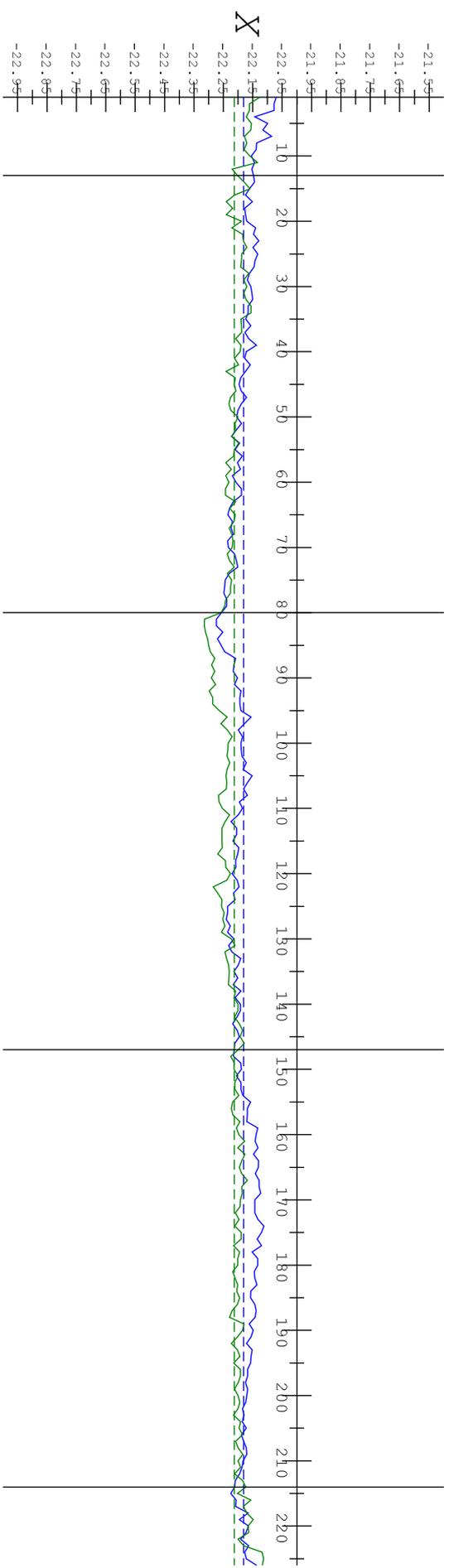
Symmetry Axis is the symmetry axis between the Upper and Lower Pole Tips  
 Included Angle is the angle between the Upper and Lower Pole Tips



Undulator Pole Tip Angles  
 Post Magnetic Alignment

DATE: 22-OCT-2009  
 UNDUULATOR # 15  
 DATASET # 0003  
 PROGRAM VERSION 2.9

# Pole Tip Number ----->

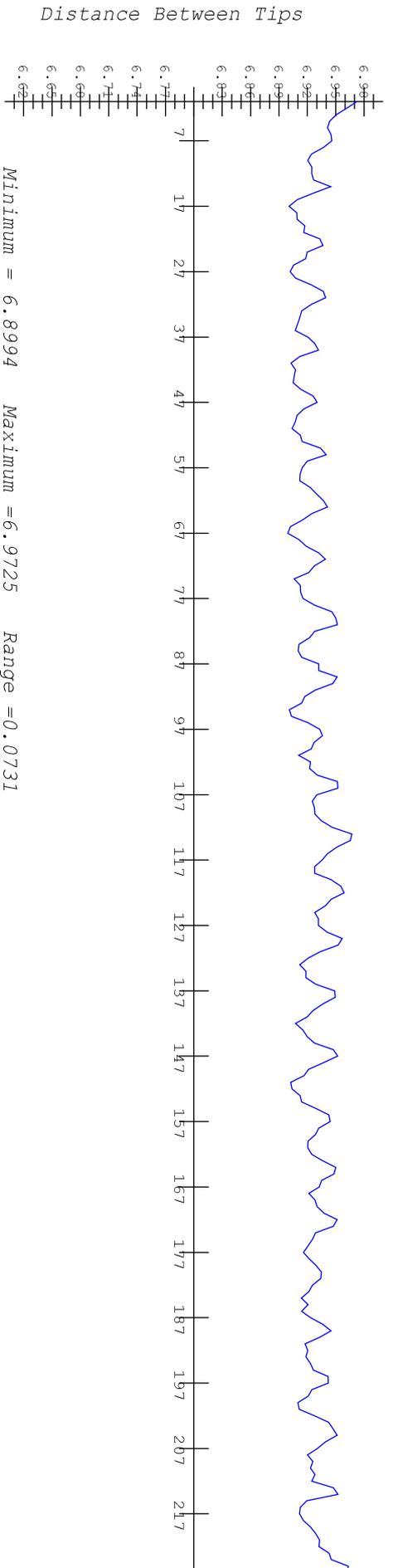


X values in mm  
 Green Solid = Point on front face of Upper Pole Tip 10mm above Magnetic C/L  
 Green Dash = Mean value of all Upper Pole Tips 10mm above Magnetic C/L Mean value Upper Pole Tips = -22.213  
 Blue Solid = Point on front face of Lower Pole Tip 10mm below Magnetic C/L  
 Blue Dash = Mean value of all Lower Pole Tips 10mm below Magnetic C/L Mean value Lower Pole Tips = -22.181



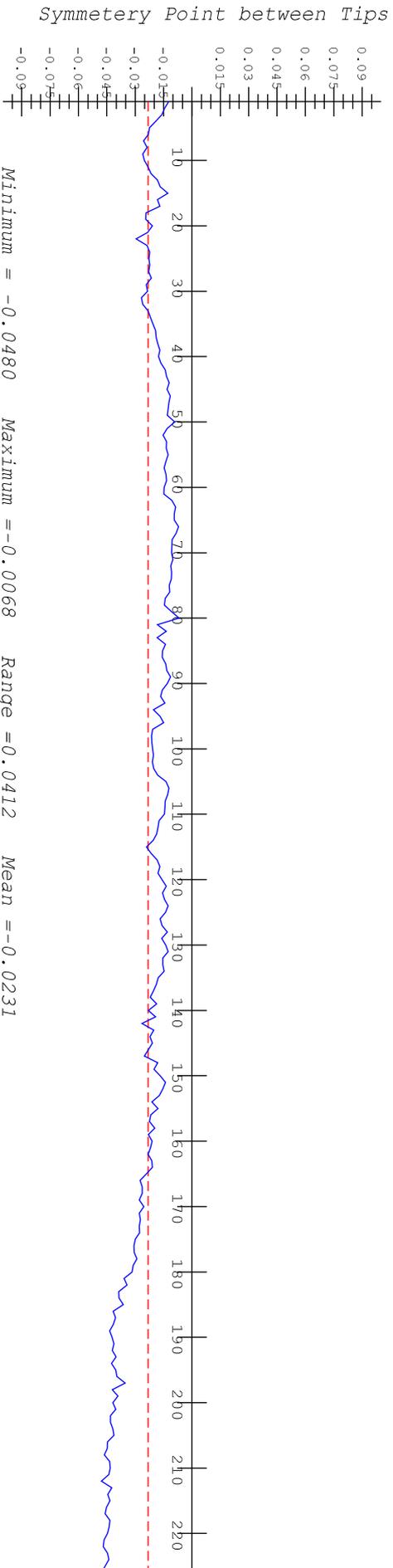
## Undulator Pole Tip Location Post Magnetic Alignment

DATE: 22-OCT-2009  
 UNDUULATOR # 15  
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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

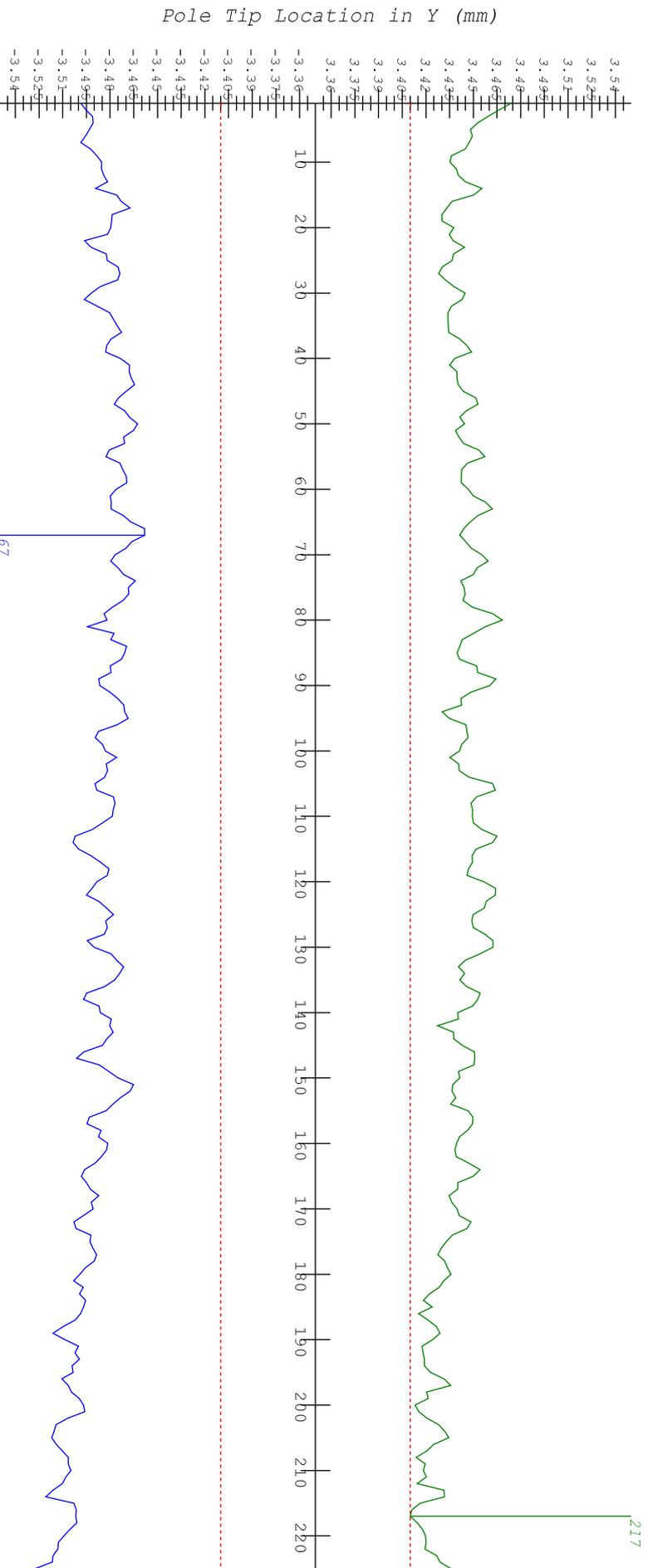


Undulator Pole Tip Location  
 Post Magnetic Alignment

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Maximum Chamber Gap = 6.8200

Minimum = 3.4100 Maximum = 3.4739 Range = 0.0640



Minimum = -3.5289 Maximum = -3.4580 Range = 0.0709

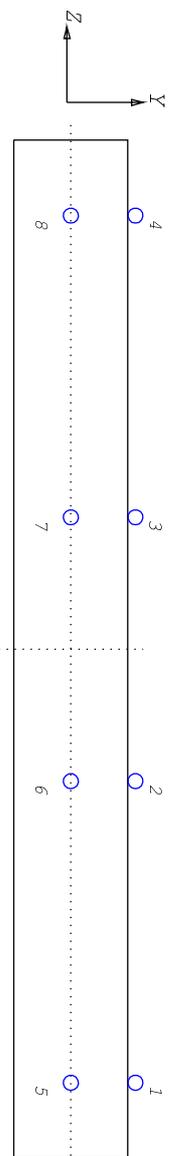
Pole Tip Number ----->

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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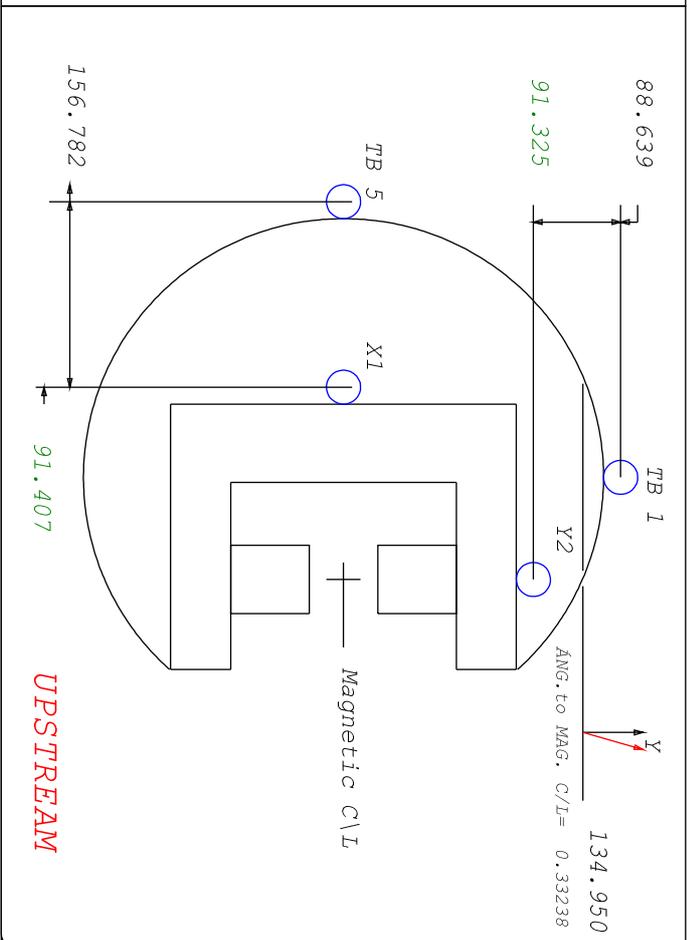
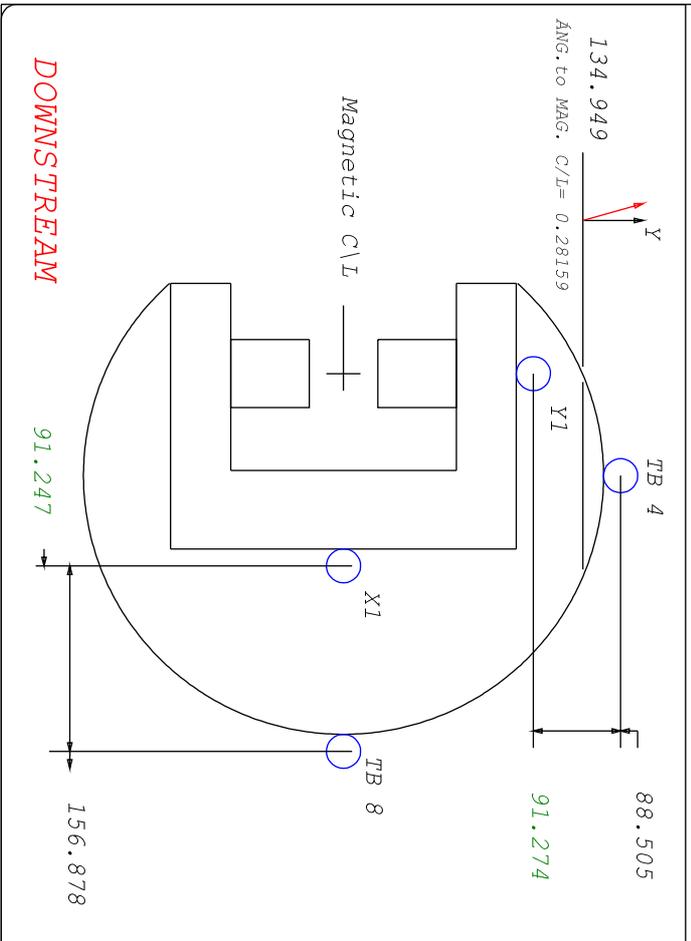
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	-0.2556	179.9642	-1558.235
2	-0.3720	179.9371	-584.5810
3	-0.3928	179.8341	591.4162
4	-0.0843	179.7790	1562.1994
5	248.1892	0.0969	1558.101
6	248.0813	0.0291	-584.5481
7	248.1865	0.0035	591.4646
8	248.1248	-0.1401	1562.2913

	C/L Offset	Length
Top Magnetic Structure	-0.023	3380.950
Bottom Magnetic Structure	0.023	3381.050
Strongback	0.475	3400.013

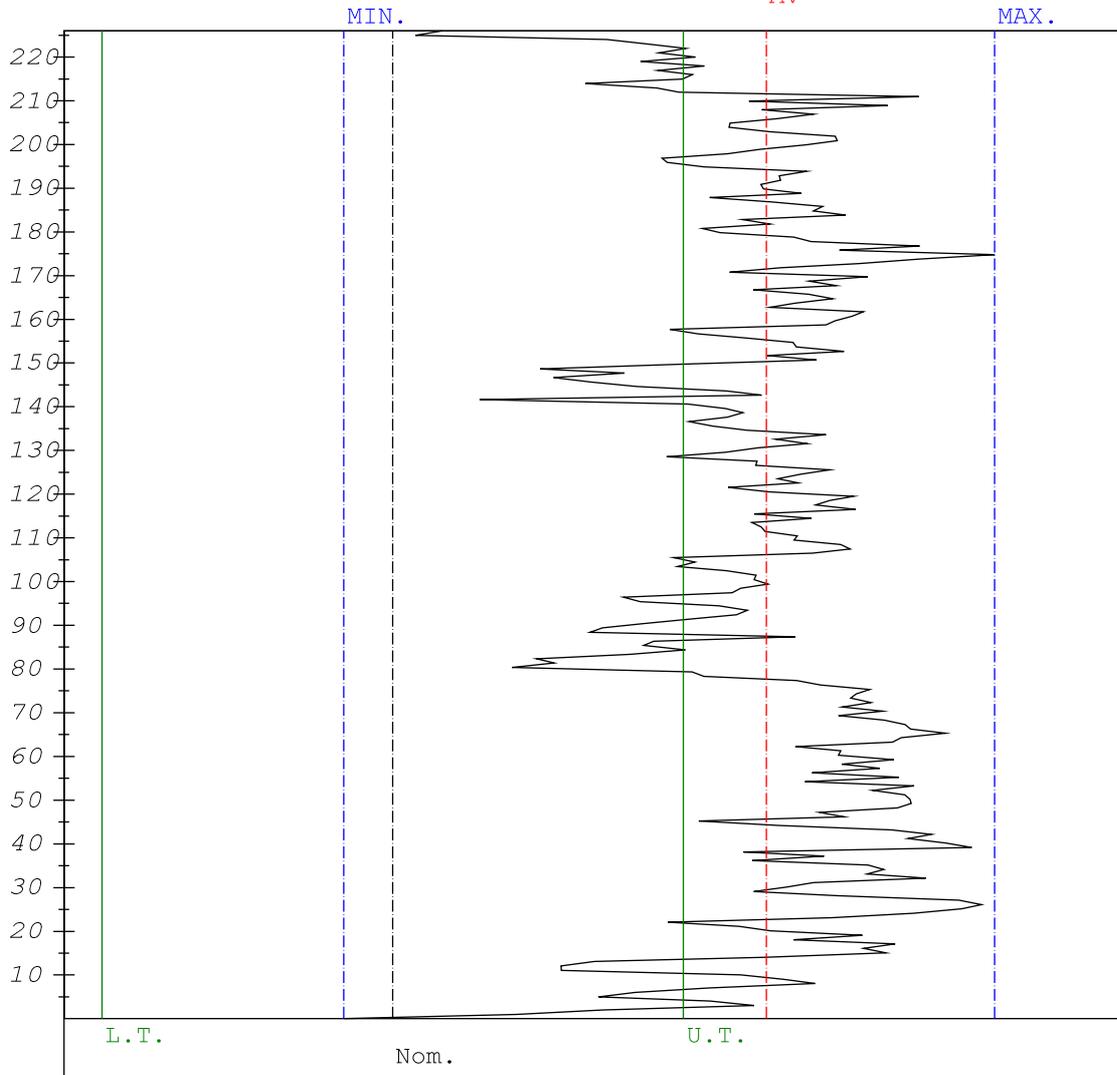
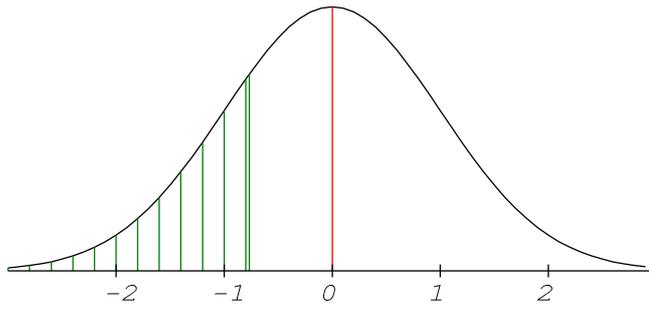
Dimensions in mm

Angles in mrad



Undulator Dimensional Fiducialization  
Post Magnetic Alignment

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Nominal : 4.5000	Averag : 5.1426	Cent.-Dev. : 0.6426
Up. Tol. : 0.5	Maximum : 5.5357	U.Tol.Ex. > : 77.8 %
Low.Tol. : -0.5	Minimum : 4.4157	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.1859	In Tolerance: 22.2 %
Outlier : 0	Distribution : NOR	Dimension : mrad



Statistical Evaluation  
 Pole Tip Gap Angle  
 Post Magnetic Alignment

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