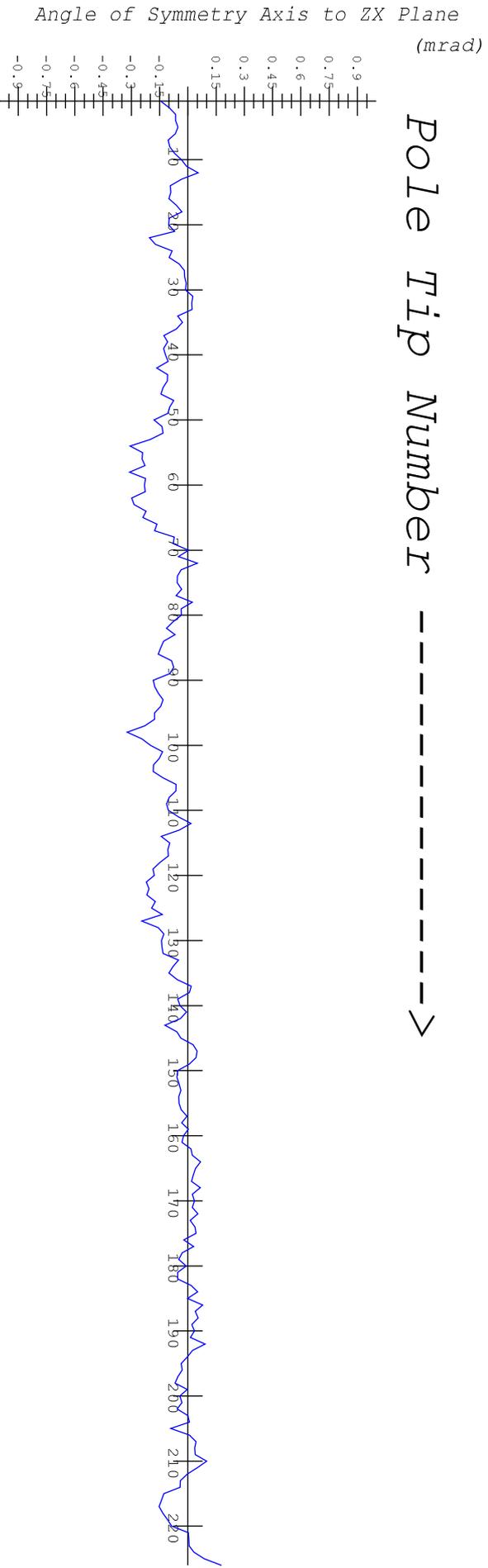


Pole Tip Number ----->



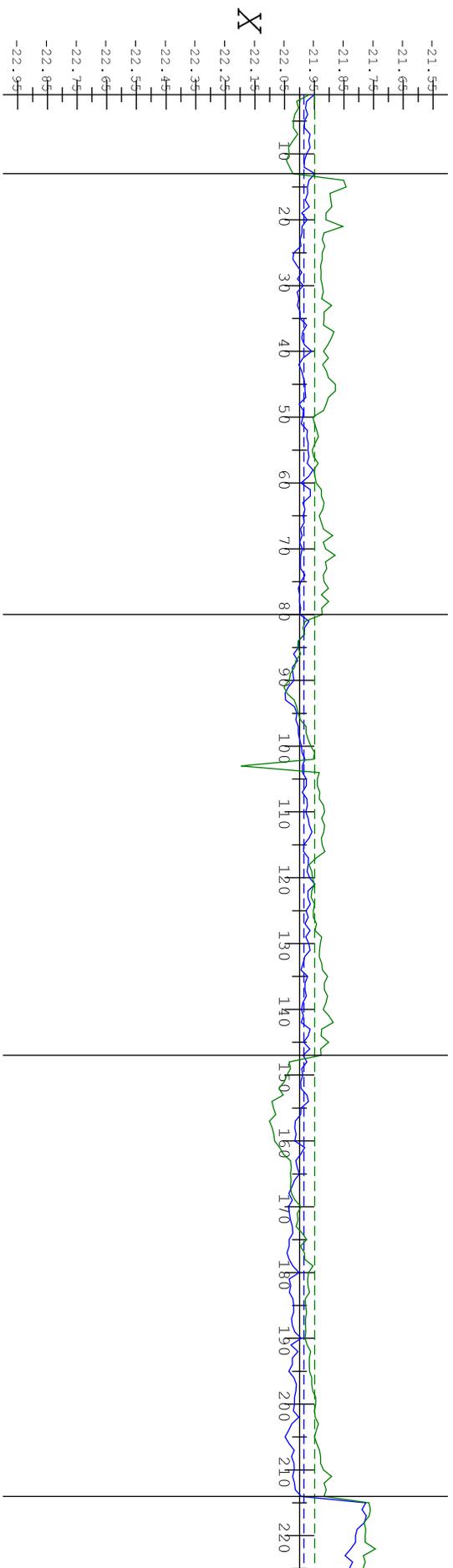
Symmetry Axis is the symmetry axis between the Upper and Lower Pole Tips  
 Included Angle is the angle between the Upper and Lower Pole Tips



Undulator Pole Tip Angles  
 Post Magnetic Alignment

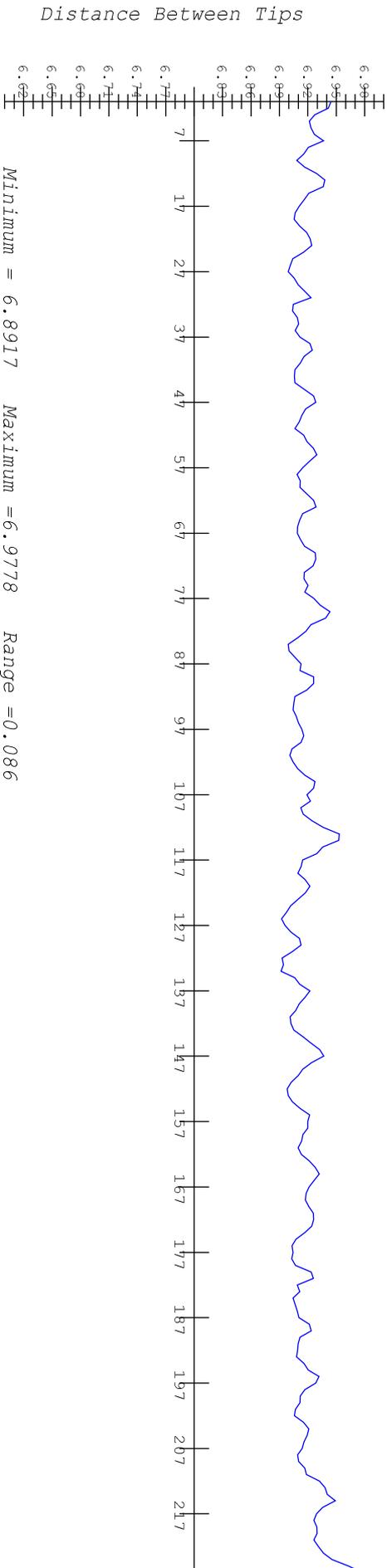
DATE: 22-FEB-2012  
 UNDUULATOR # 18  
 DATASET # 0004  
 PROGRAM VERSION 2.9

# Pole Tip Number ----->



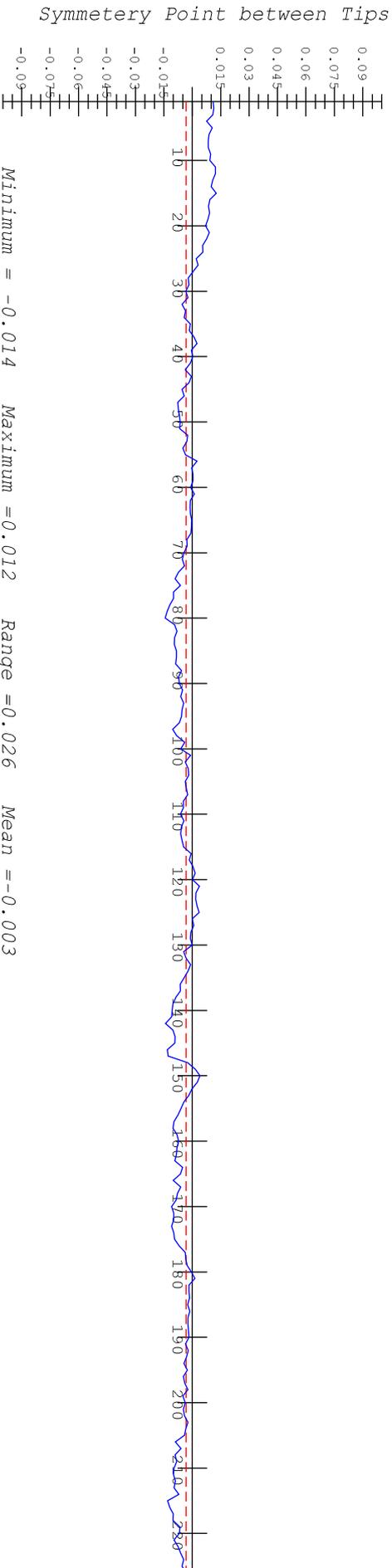
## Undulator Pole Tip Location Post Magnetic Alignment

DATE: 22-FEB-2012  
 UNDULATOR # 18  
 DATASET # 0004  
 PROGRAM VERSION 2.9



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

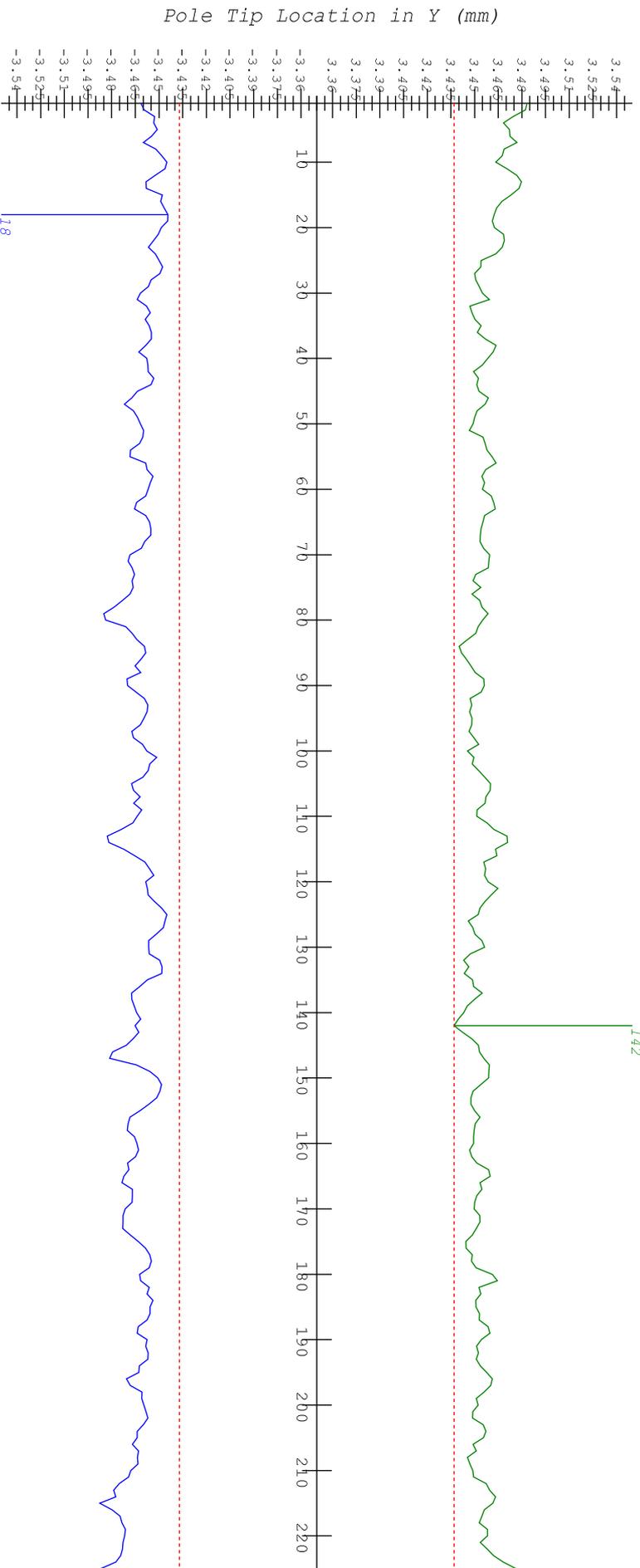


Undulator Pole Tip Location  
 Post Magnetic Alignment

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 UNDUULATOR # 18  
 DATASET # 0004  
 PROGRAM VERSION 2.9

Maximum Chamber Gap = 6.8741

Minimum = 3.4370    Maximum = 3.4854    Range = 0.048



Minimum = -3.4924    Maximum = -3.4443    Range = 0.048

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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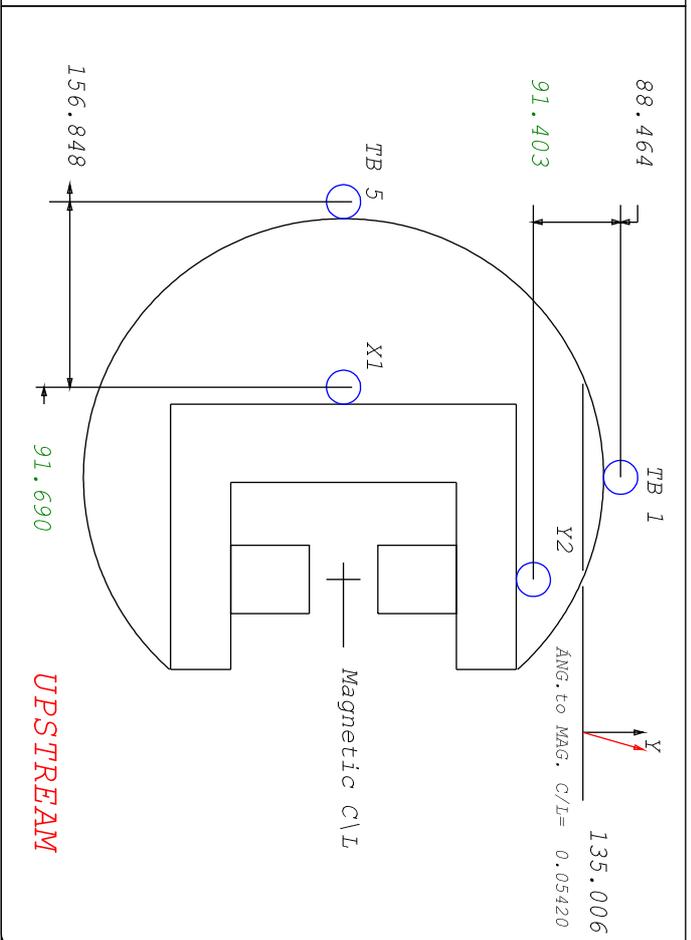
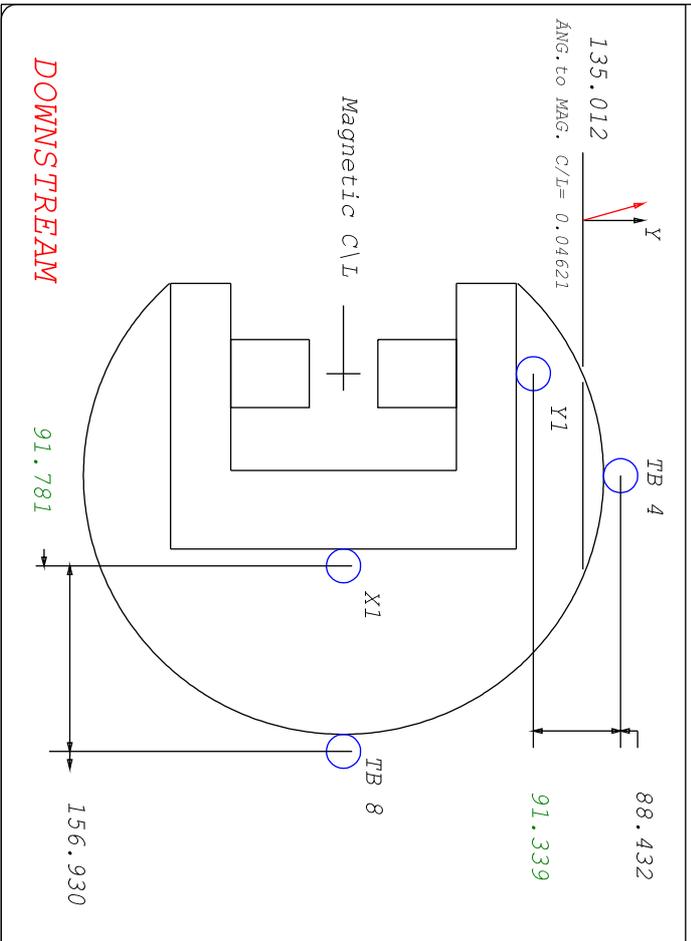
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	0.1960	179.8670	-1558.045
2	0.2525	179.6975	-584.5457
3	0.3304	179.6937	591.4514
4	0.3849	179.7708	1562.3041
5	248.5378	0.0708	-1558.180
6	248.6195	0.0837	-584.4803
7	248.6365	0.0913	591.4799
8	248.7115	0.1093	1562.2807

	C/L Offset	Length
Top Magnetic Structure	0.000	3380.647
Bottom Magnetic Structure	0.000	3380.724
Strongback	0.453	3400.007

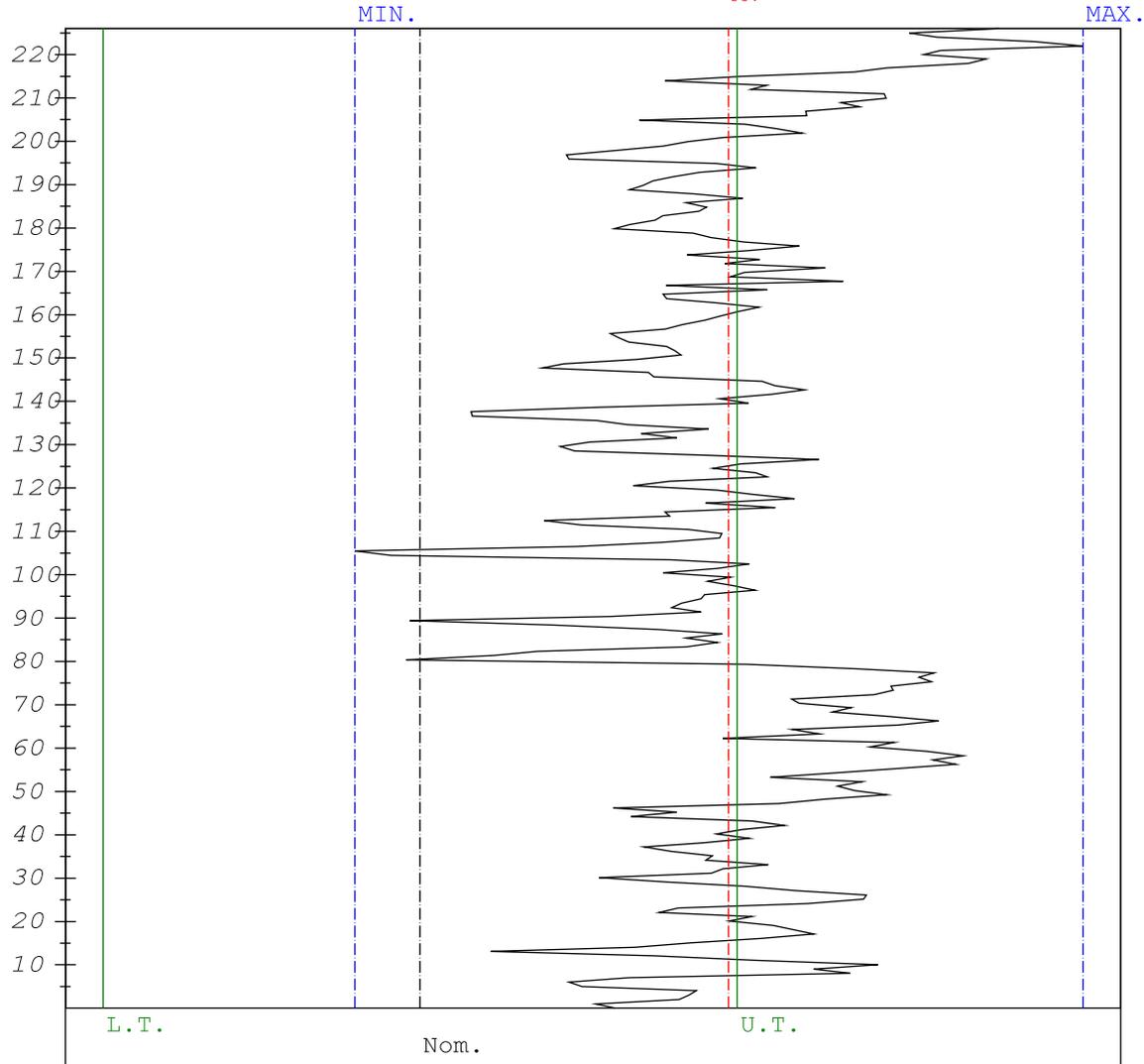
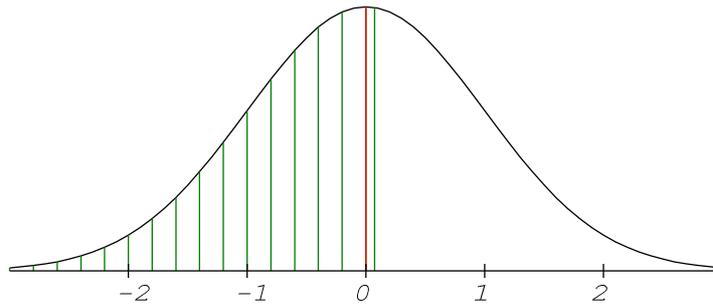
Dimensions in mm

Angles in mrad



# Undulator Dimensional Fiducialization Post Magnetic Alignment

DATE: 22-FEB-2012  
 UNDULATOR # 18  
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 PROGRAM VERSION 2.9



Nominal : 4.5000	Averag : 4.9867	Cent.-Dev. : 0.4867
Up. Tol. : 0.5	Maximum : 5.5456	U.Tol.Ex. > : 47.2 %
Low.Tol. : -0.5	Minimum : 4.3974	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.1857	In Tolerance: 52.8 %
Outlier : 0	Distribution : NOR	Dimension : mrad



Statistical Evaluation  
 Pole Tip Gap Angle  
 Post Magnetic Alignment

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 UNDULATOR # 18  
 DATASET # 0004  
 PROGRAM VERSION 2.9