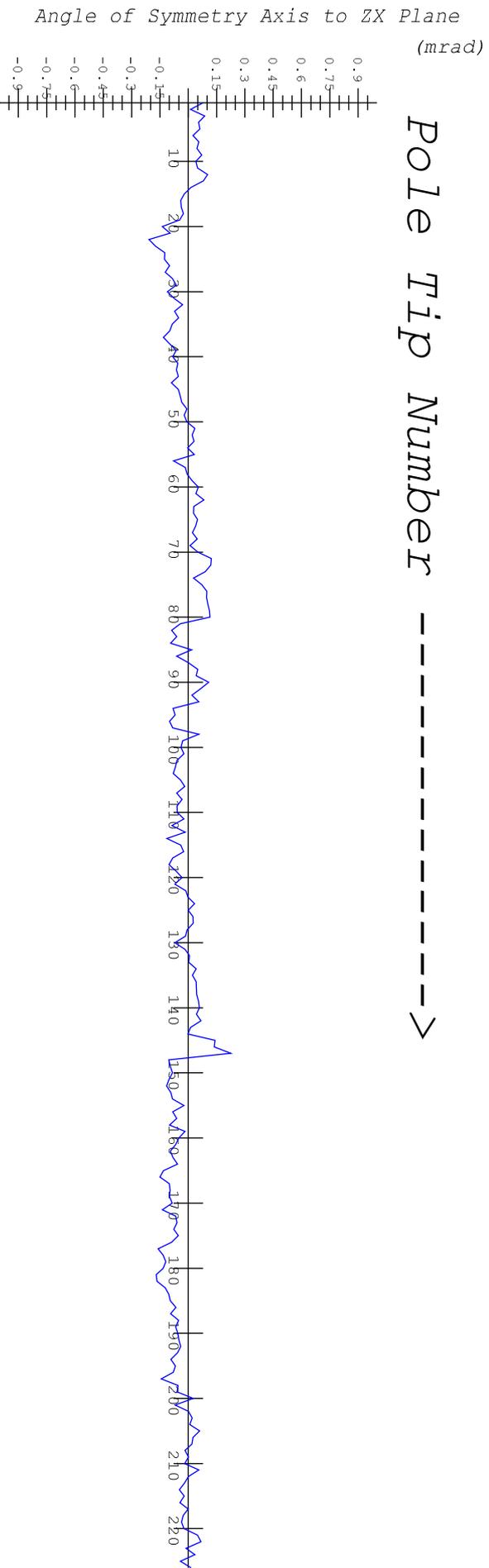


Pole Tip Number ----->



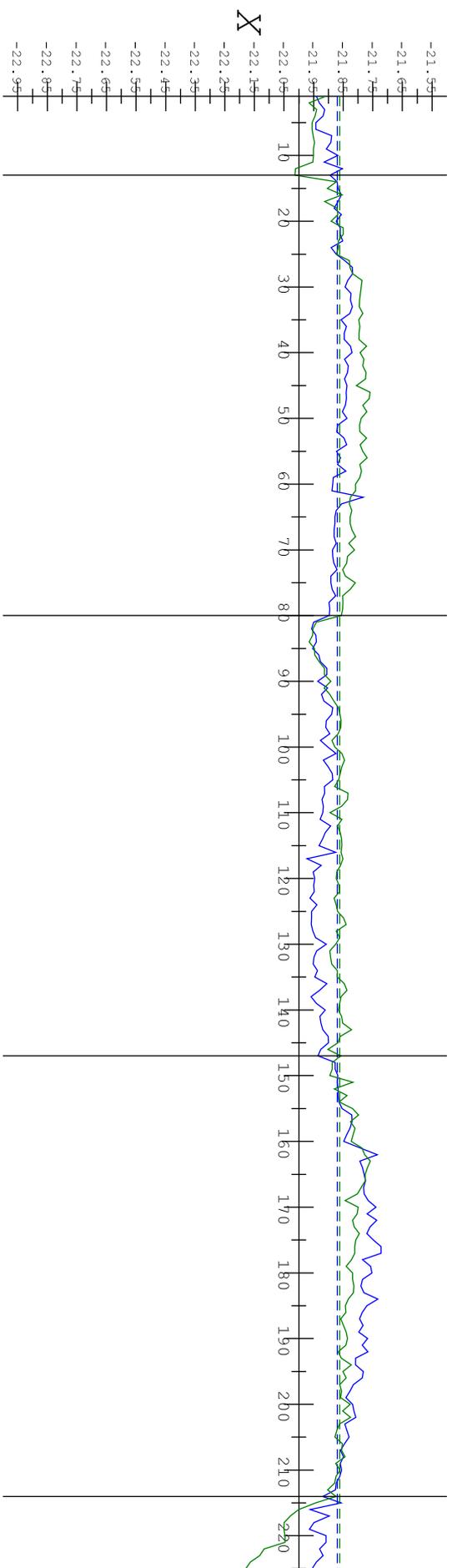
Symmetry Axis is the symmetry axis between the Upper and Lower Pole Tips  
 Included Angle is the angle between the Upper and Lower Pole Tips



Undulator Pole Tip Angles  
 Post Magnetic Alignment

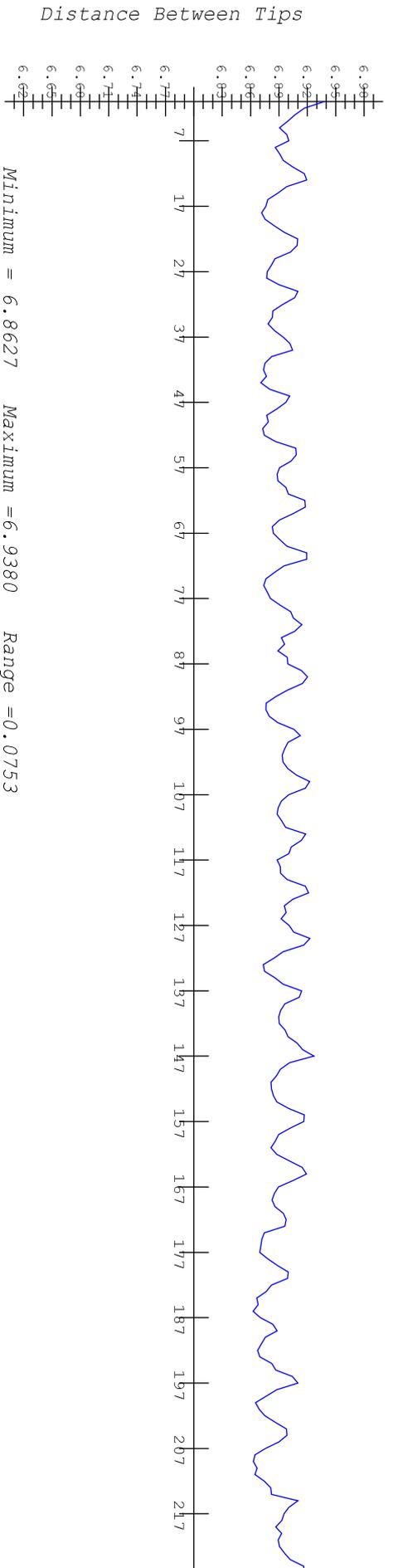
DATE: 20-MAR-2009  
 UNDULATOR # 13  
 DATASET # 0019  
 PROGRAM VERSION 2.9

# Pole Tip Number ----->



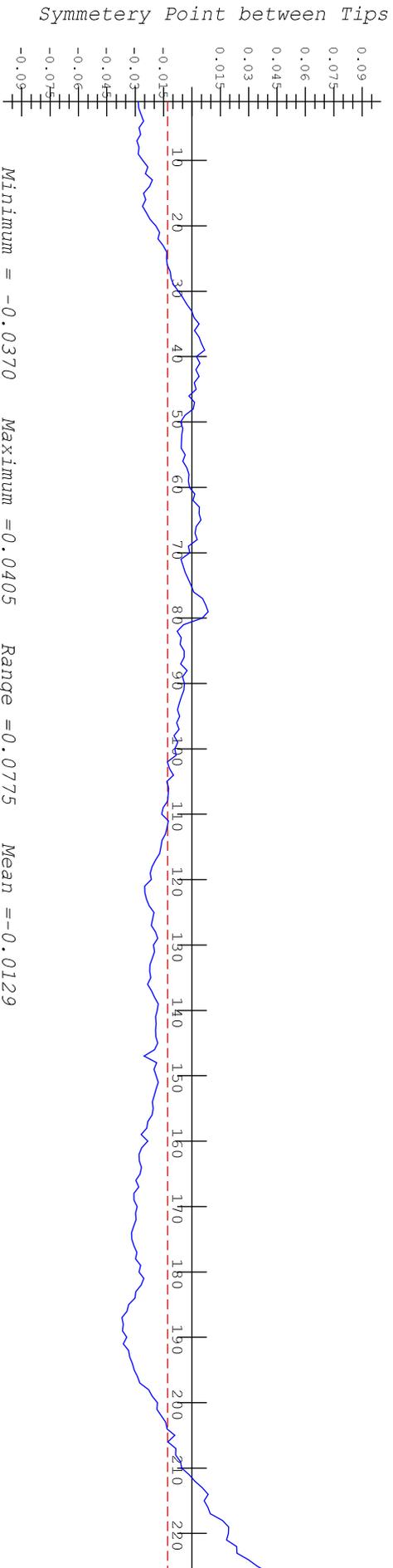
## Undulator Pole Tip Location Post Magnetic Alignment

DATE: 20-MAR-2009  
 UNDULATOR # 13  
 DATASET # 0019  
 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

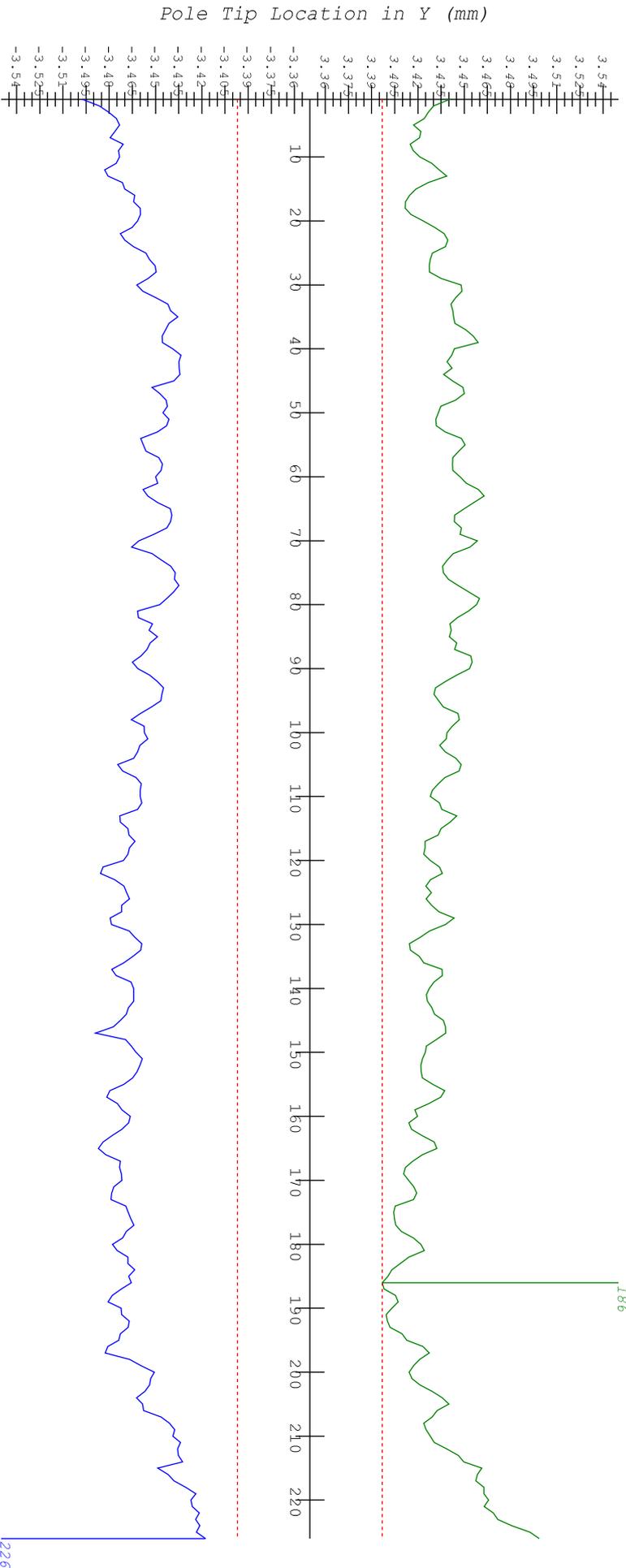


Undulator Pole Tip Location  
 Post Magnetic Alignment

DATE: 20-MAR-2009  
 UNDUULATOR # 13  
 DATASET # 0019  
 PROGRAM VERSION 2.9

Maximum Chamber Gap = 6.7939

Minimum = 3.3969    Maximum = 3.4987    Range = 0.1018



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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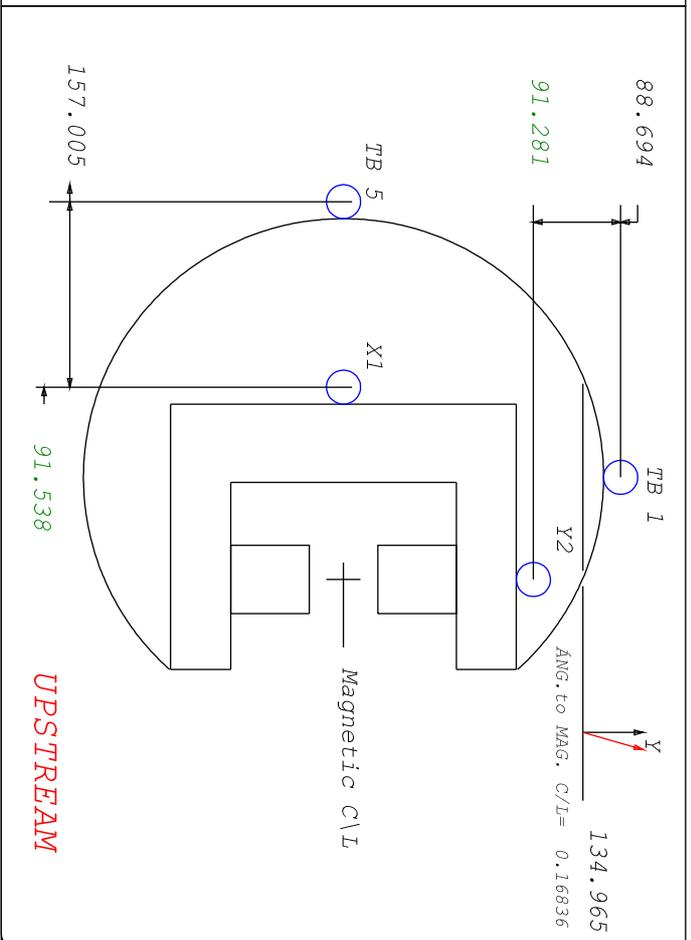
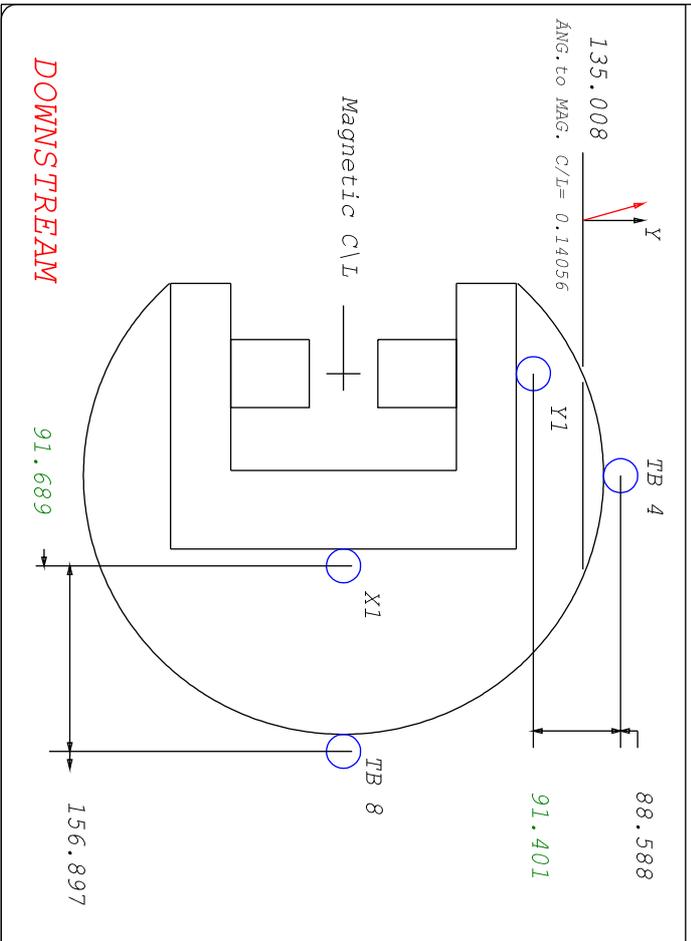
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	0.2148	179.9747	-1558.289
2	0.3677	180.0026	-584.4547
3	0.2701	179.8912	591.3042
4	0.2314	179.9890	1562.0754
5	248.5432	0.0602	-1558.337
6	248.5136	-0.0365	-584.6043
7	248.5383	0.0340	591.3240
8	248.5861	-0.0668	1562.0876

	C/L Offset	Length
Top Magnetic Structure	-0.096	3381.057
Bottom Magnetic Structure	0.096	3381.281
Strongback	0.249	3399.785

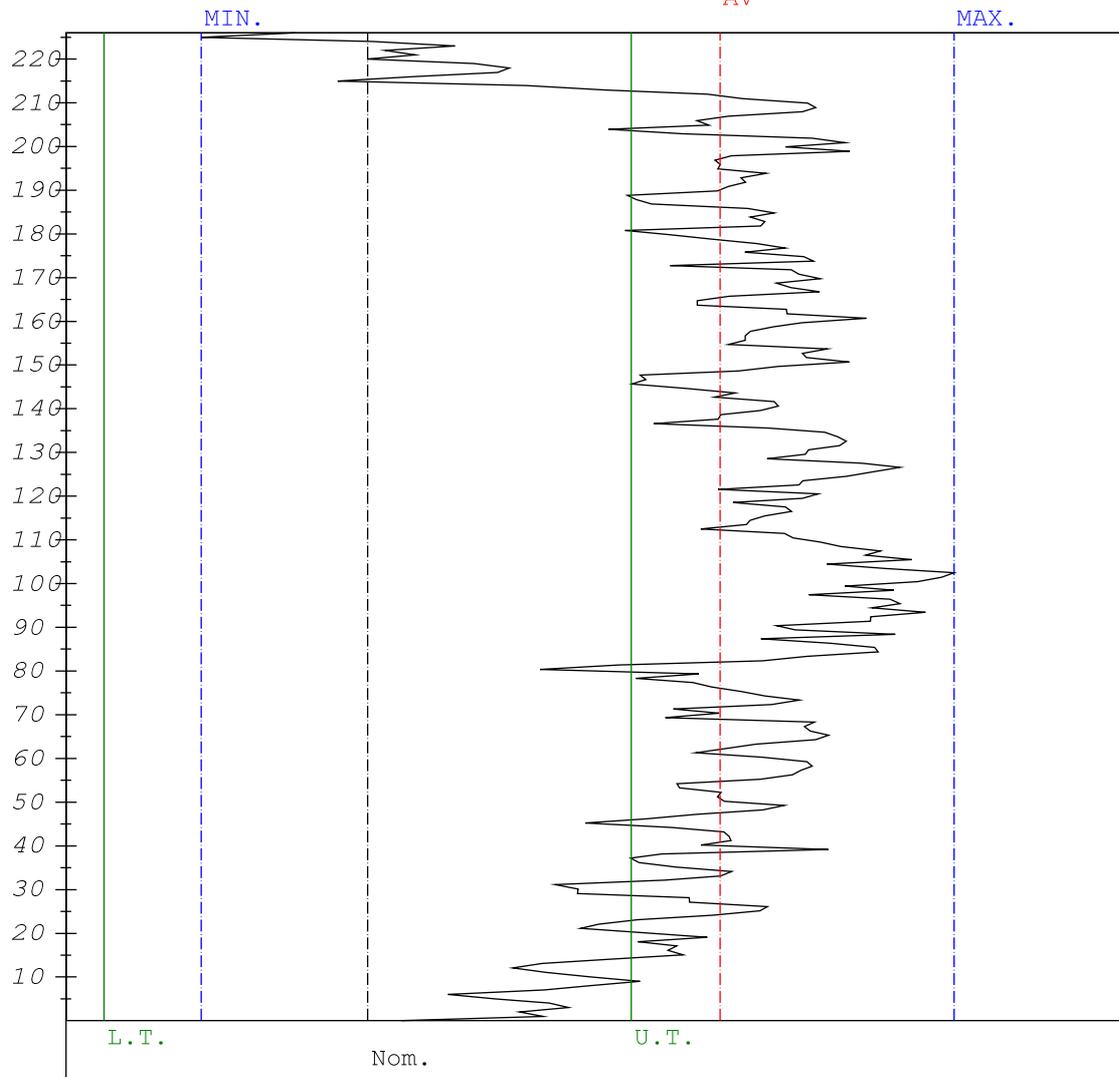
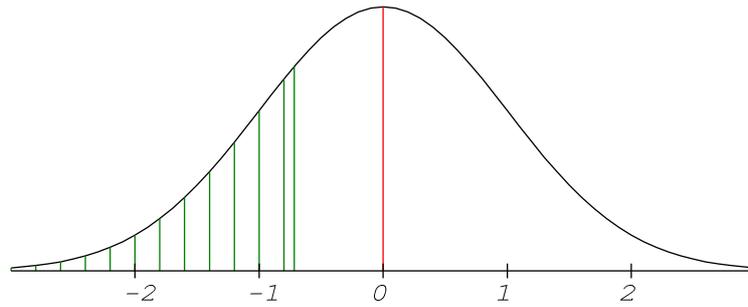
Dimensions in mm

Angles in mrad



# Undulator Dimensional Fiducialization Post Magnetic Alignment

DATE: 20-MAR-2009  
 UNDULATOR # 13  
 DATASET # 0019  
 PROGRAM VERSION 2.9



Nominal : 4.5000	Averag : 5.1684	Cent.-Dev. : 0.6684
Up. Tol. : 0.5	Maximum : 5.6121	U.Tol.Ex. > : 76.3 %
Low.Tol. : -0.5	Minimum : 4.1842	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.2353	In Tolerance: 23.7 %
Outlier : 0	Distribution : NOR	Dimension : mrad



Statistical Evaluation  
Pole Tip Gap Angle  
Post Magnetic Alignment

DATE: 20-MAR-2009  
UNDULATOR # 13  
DATASET # 0019  
PROGRAM VERSION 2.9