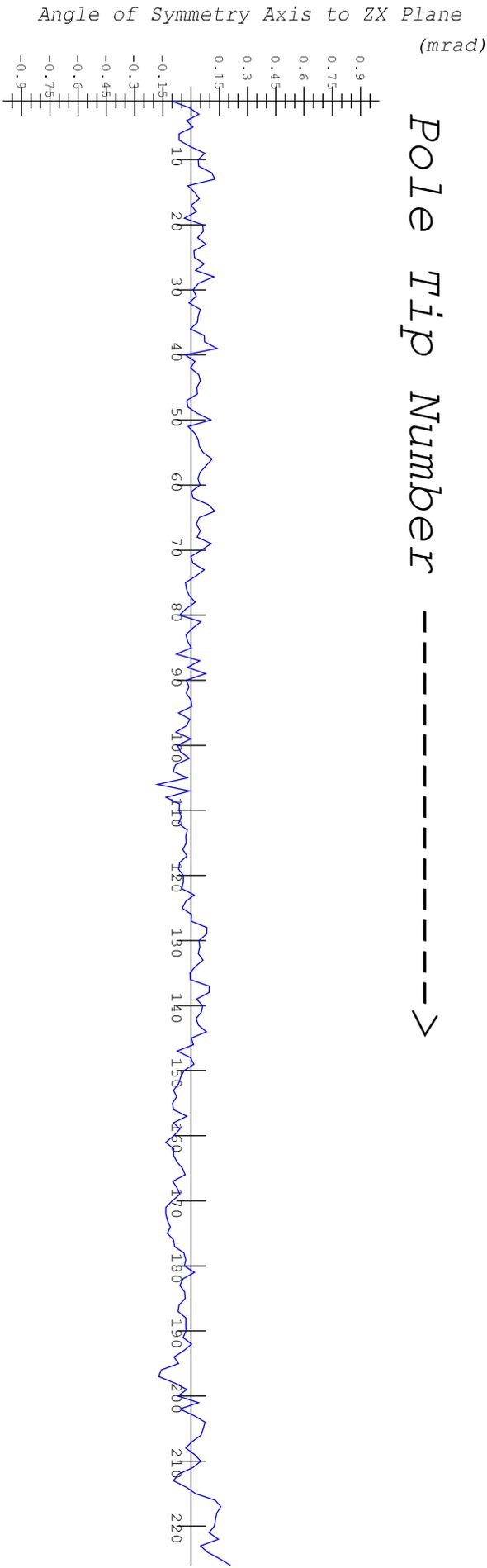


Pole Tip Number ----->



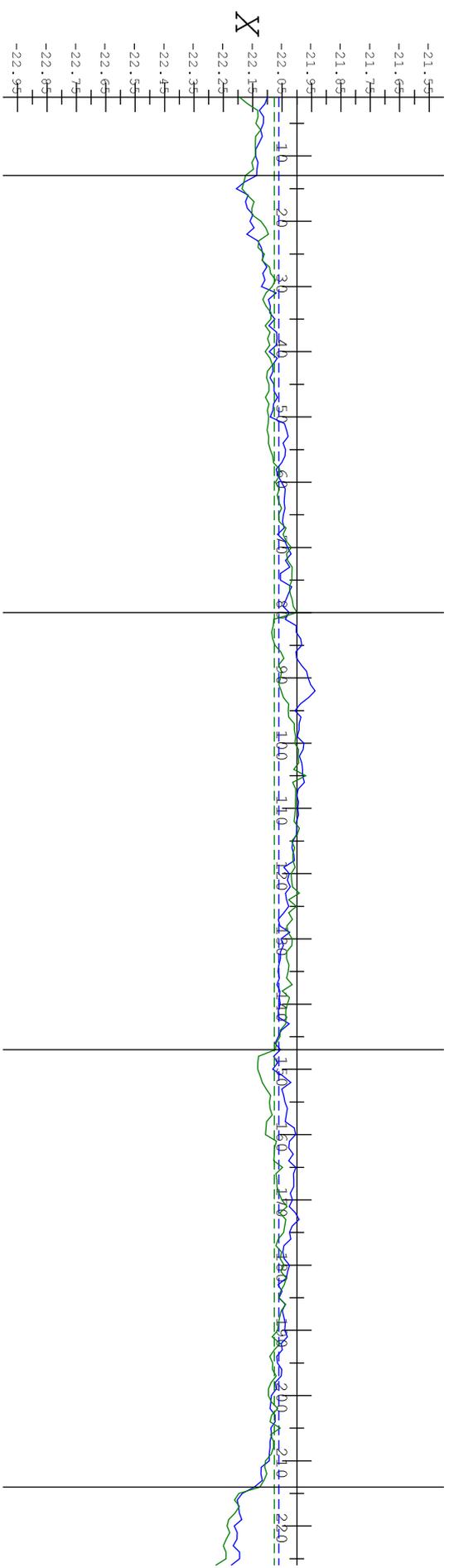
Symmetry Axis is the symmetry axis between the Upper and Lower Pole Tips  
 Included Angle is the angle between the Upper and Lower Pole Tips



Undulator Pole Tip Angles  
 Post Magnetic Alignment

DATE: 02-JUN-2010  
 UNDUULATOR # 32  
 DATASET # 0004  
 PROGRAM VERSION 4.0

# Pole Tip Number ----->

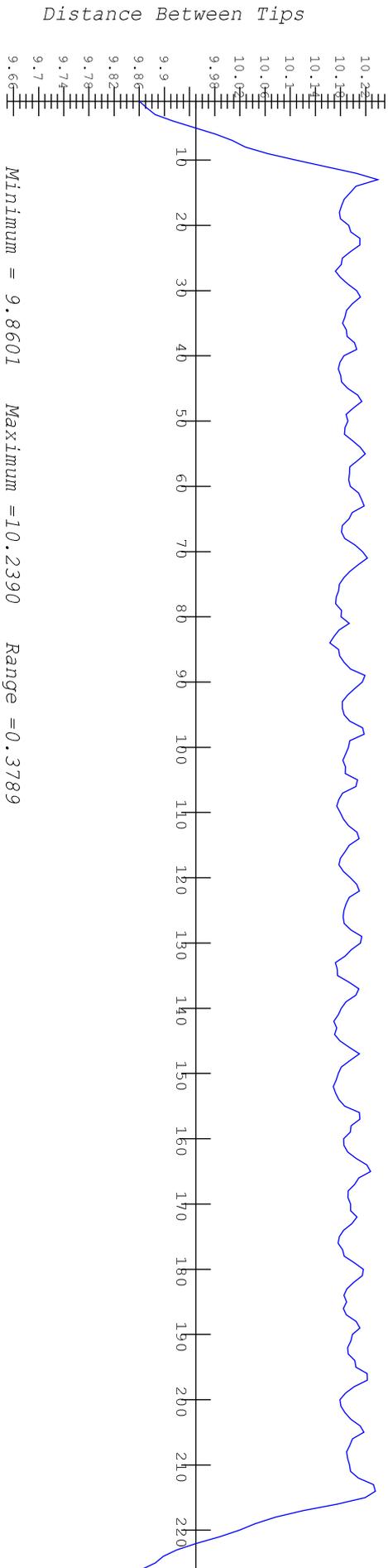


X values in mm  
 Green Solid = Point on front face of Upper Pole Tip 10mm above Magnetic C/L  
 Green Dash = Mean value of all Upper Pole Tips 10mm above Magnetic C/L Mean value Upper Pole Tips = -22.077  
 Blue Solid = Point on front face of Lower Pole Tip 10mm below Magnetic C/L  
 Blue Dash = Mean value of all Lower Pole Tips 10mm below Magnetic C/L Mean value Lower Pole Tips = -22.061

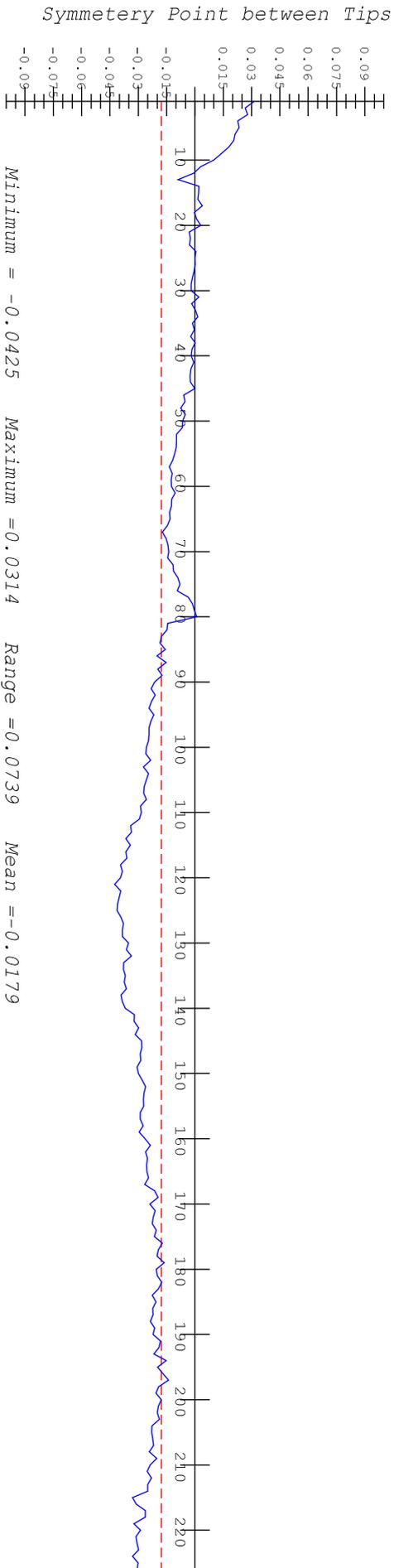


## Undulator Pole Tip Location Post Magnetic Alignment

DATE: 02-JUN-2010  
 UNDUULATOR # 32  
 DATASET # 0004  
 PROGRAM VERSION 4.0



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

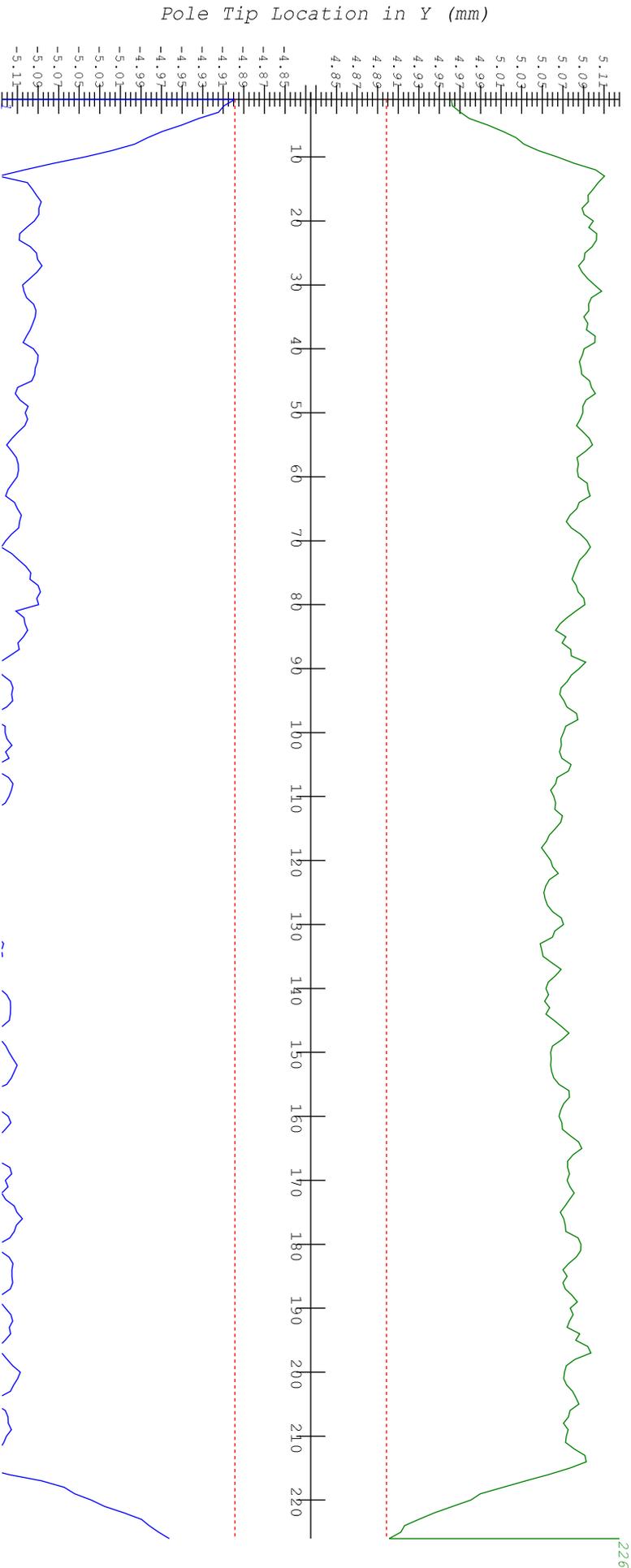


Undulator Pole Tip Location  
 Post Magnetic Alignment

DATE: 02-JUN-2010  
 UNDUULATOR # 32  
 DATASET # 0004  
 PROGRAM VERSION 4.0

Maximum Chamber Gap = 9.7974

Minimum = 4.9012    Maximum = 5.1105    Range = 0.2093



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

DATE: 02-JUN-2010  
UNDULATOR # 32  
DATASET # 0004  
PROGRAM VERSION 4.0



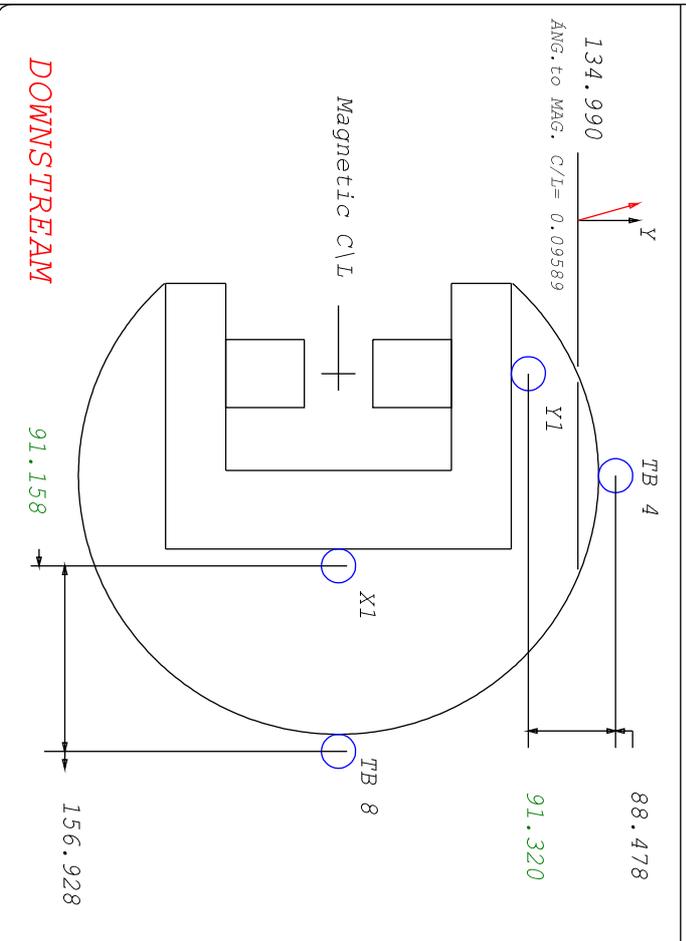
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	-0.0916	179.8672	-1558.010
2	-0.1399	179.7339	-584.4924
3	-0.0582	179.6999	591.6081
4	-0.1094	179.7977	1562.4170
5	248.1919	0.1110	-1557.985
6	248.2361	0.0272	-584.3683
7	248.1791	-0.0208	591.6650
8	248.0865	0.0095	1562.5164

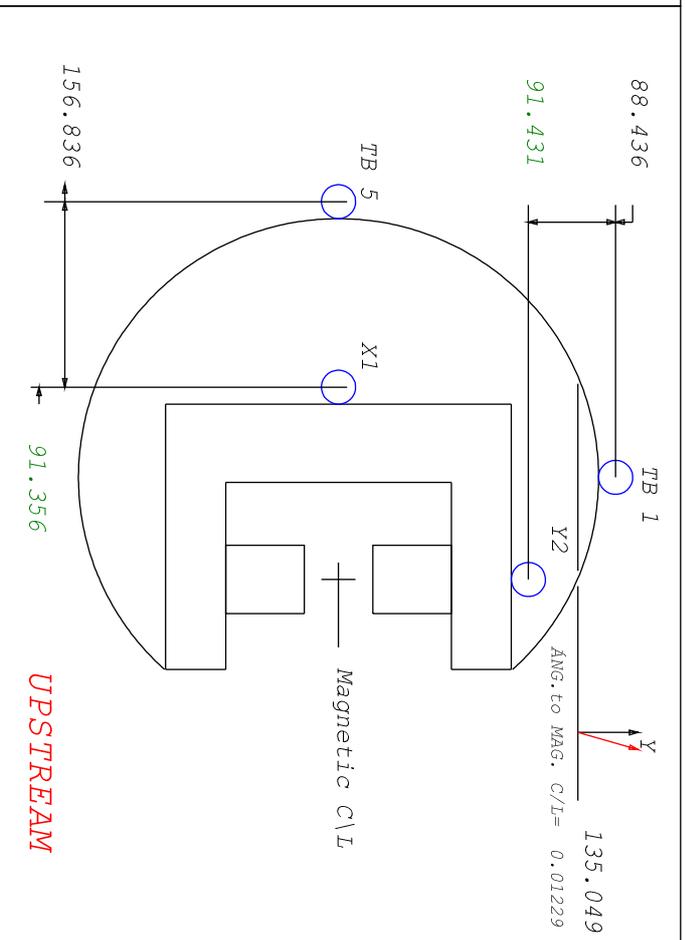
	C/L Offset	Length
Top Magnetic Structure	0.007	3380.598
Bottom Magnetic Structure	-0.007	3380.635
Strongback	0.585	3399.973

Dimensions in mm

Angles in mrad



**DOWNSTREAM**

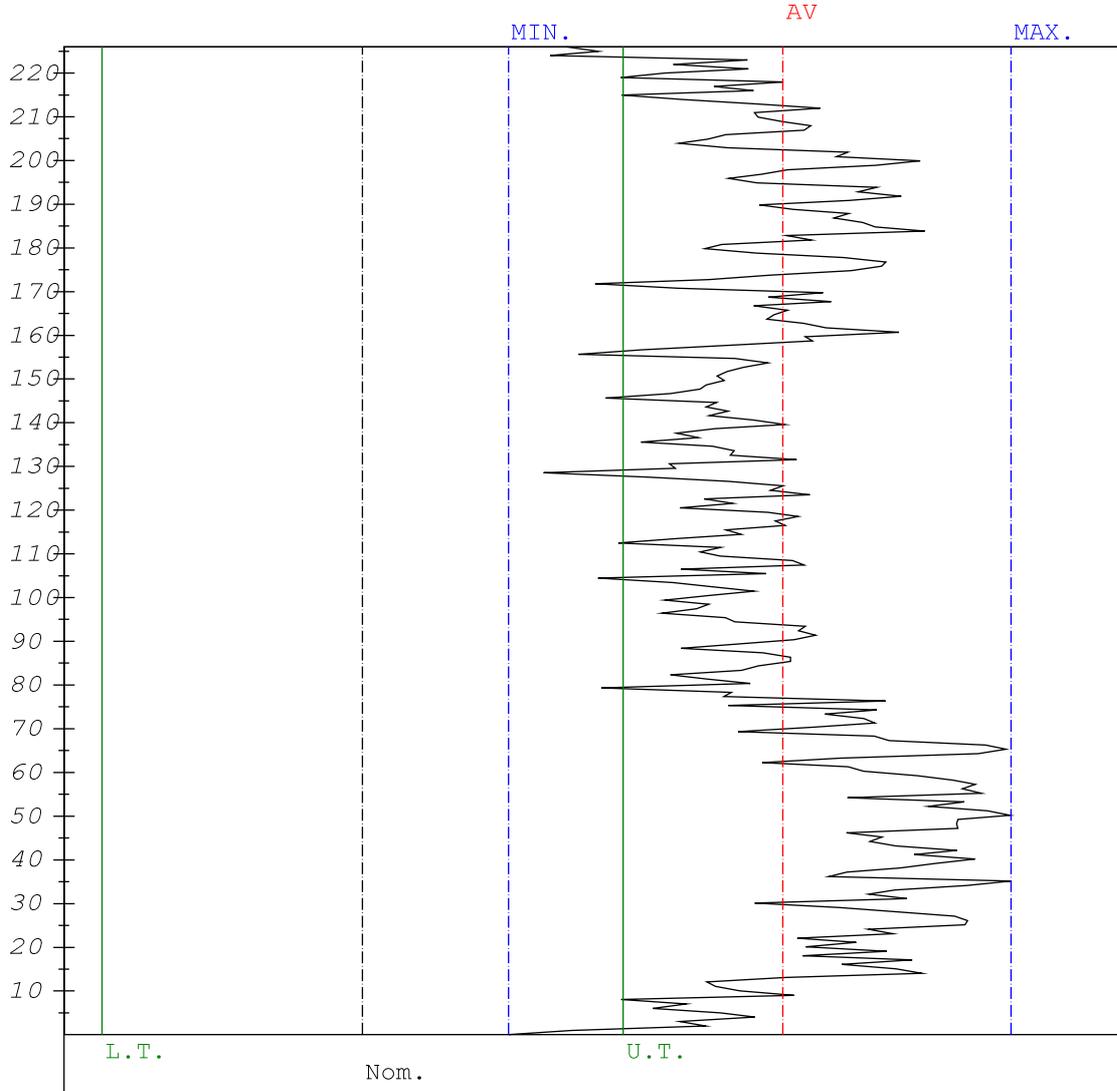
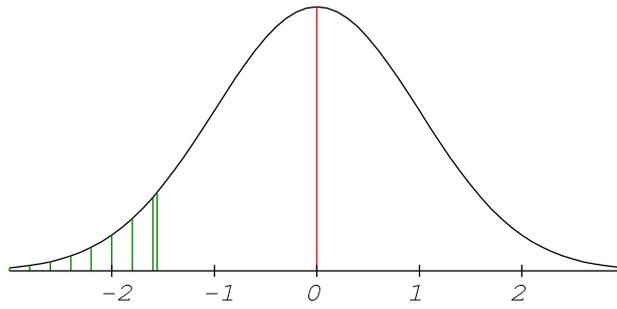


**UPSTREAM**



# Undulator Dimensional Fiducialization Post Magnetic Alignment

DATE: 02-JUN-2010  
 UNDULATOR # 32  
 DATASET # 0004  
 PROGRAM VERSION 4.0



Nominal : 4.5000	Averag : 5.3068	Cent.-Dev. : 0.8068
Up. Tol. : 0.5	Maximum : 5.7446	U.Tol.Ex. > : 94.1 %
Low.Tol. : -0.5	Minimum : 4.7806	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.1967	In Tolerance: 5.9 %
Outlier : 0	Distribution : NOR	Dimension : mrad



Statistical Evaluation  
 Pole Tip Gap Angle  
 Post Magnetic Alignment

DATE: 02-JUN-2010  
 UNDULATOR # 32  
 DATASET # 0004  
 PROGRAM VERSION 4.0