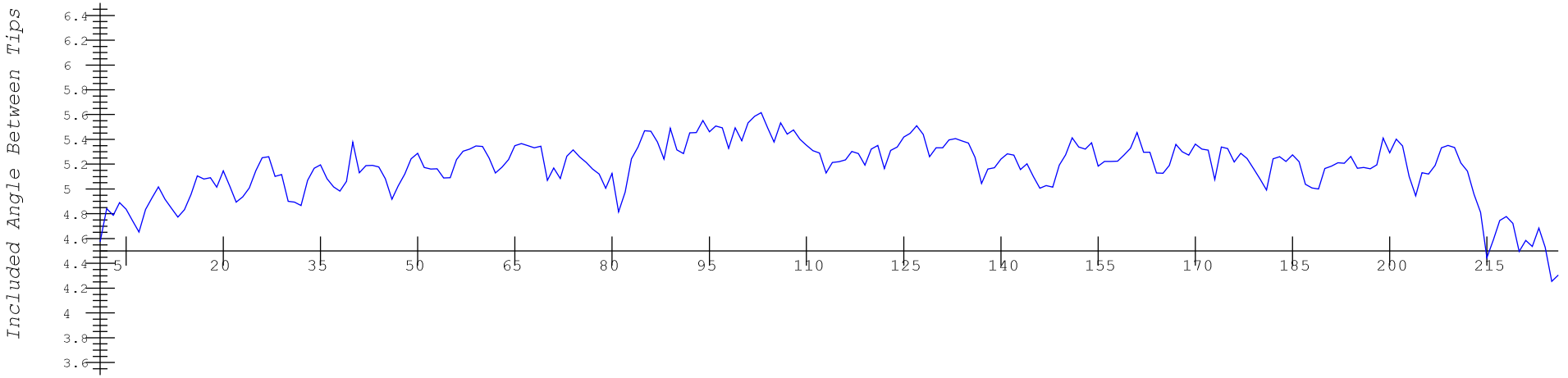
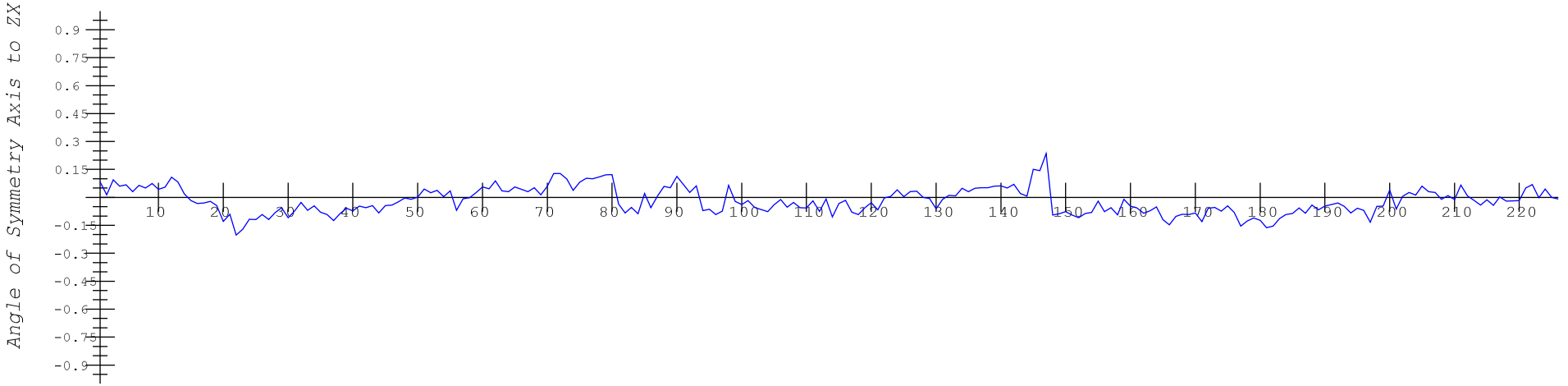


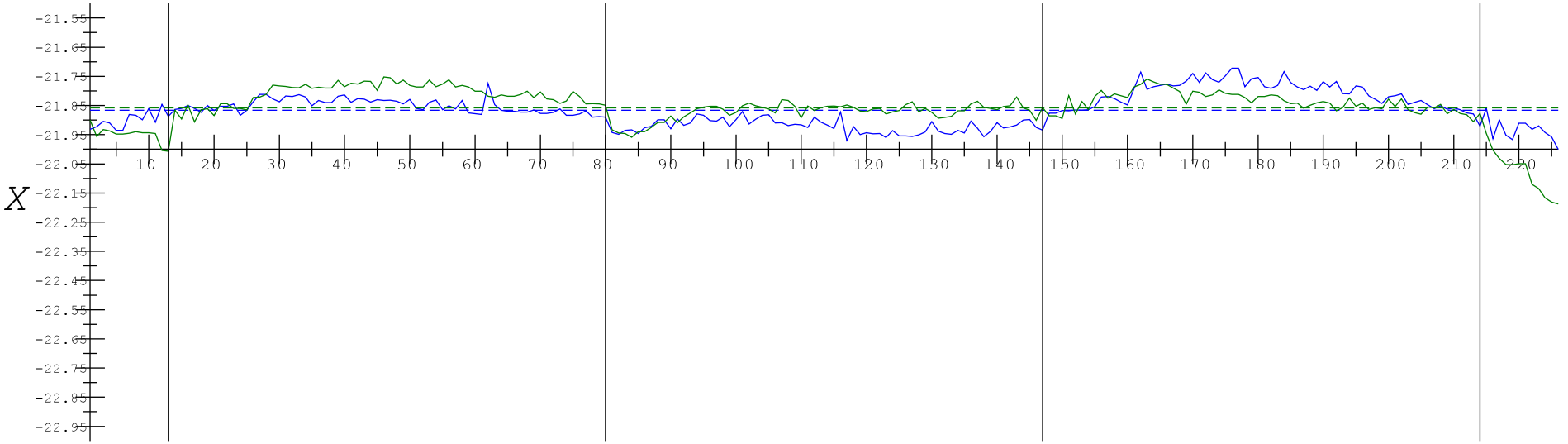
Pole Tip Number ---------->



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

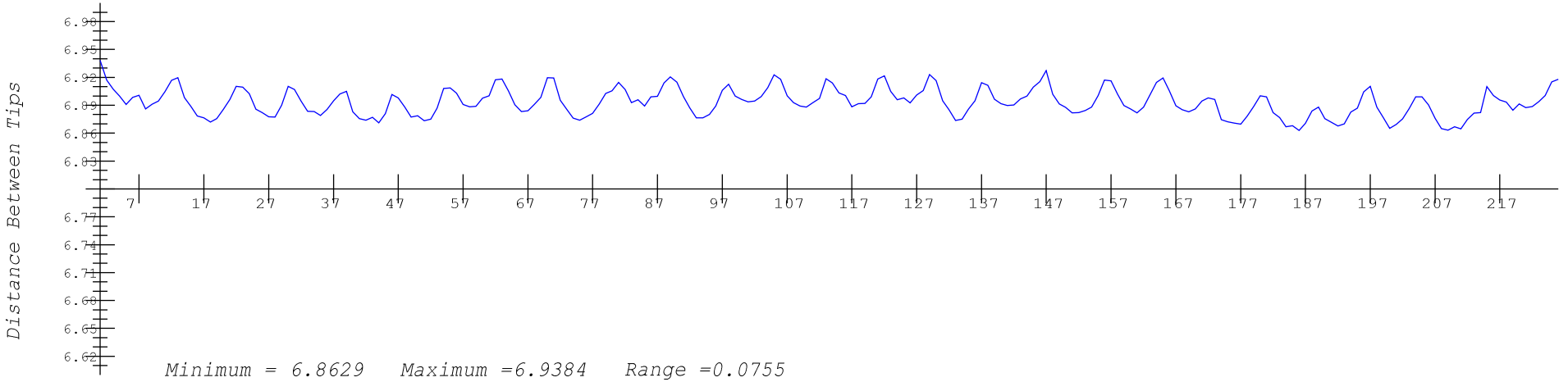
SLAC LCLS-MMF LEITZ CMM	*Undulator Pole Tip Angles* *Post Magnetic Alignment*	*DATE:12-JAN-2009* *UNDULATOR # 13* *DATASET # 0017* *PROGRAM VERSION 2.7*

Pole Tip Number ---------->



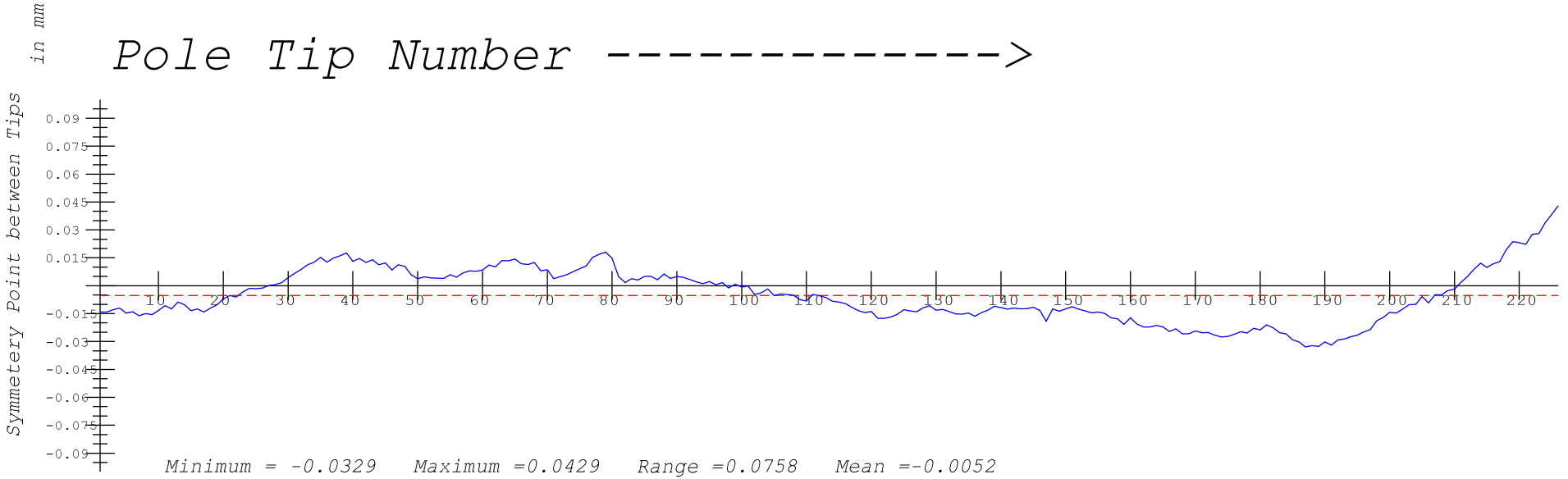
X values in mm
Green Solid = Point on front face of Upper Pole Tip 10mm above Magnetic C/L
Green Dash = Mean value of all Upper Pole Tips 10mm above Magnetic C/L Mean value Upper Pole Tips = -21.858
Blue Solid = Point on front face of Lower Pole Tip 10mm below Magnetic C/L
Blue Dash = Mean value of all Lower Pole Tips 10mm below Magnetic C/L Mean value Lower Pole Tips = -21.867

SLAC LCLS-MMF LEITZ CMM	Undulator Pole Tip Location Post Magnetic Alignment	DATE:12-JAN-2009 UNDULATOR # 13 DATASET # 0017 PROGRAM VERSION 2.7



Minimum = 6.8629 Maximum =6.9384 Range =0.0755

Pole Tip Number ---------->

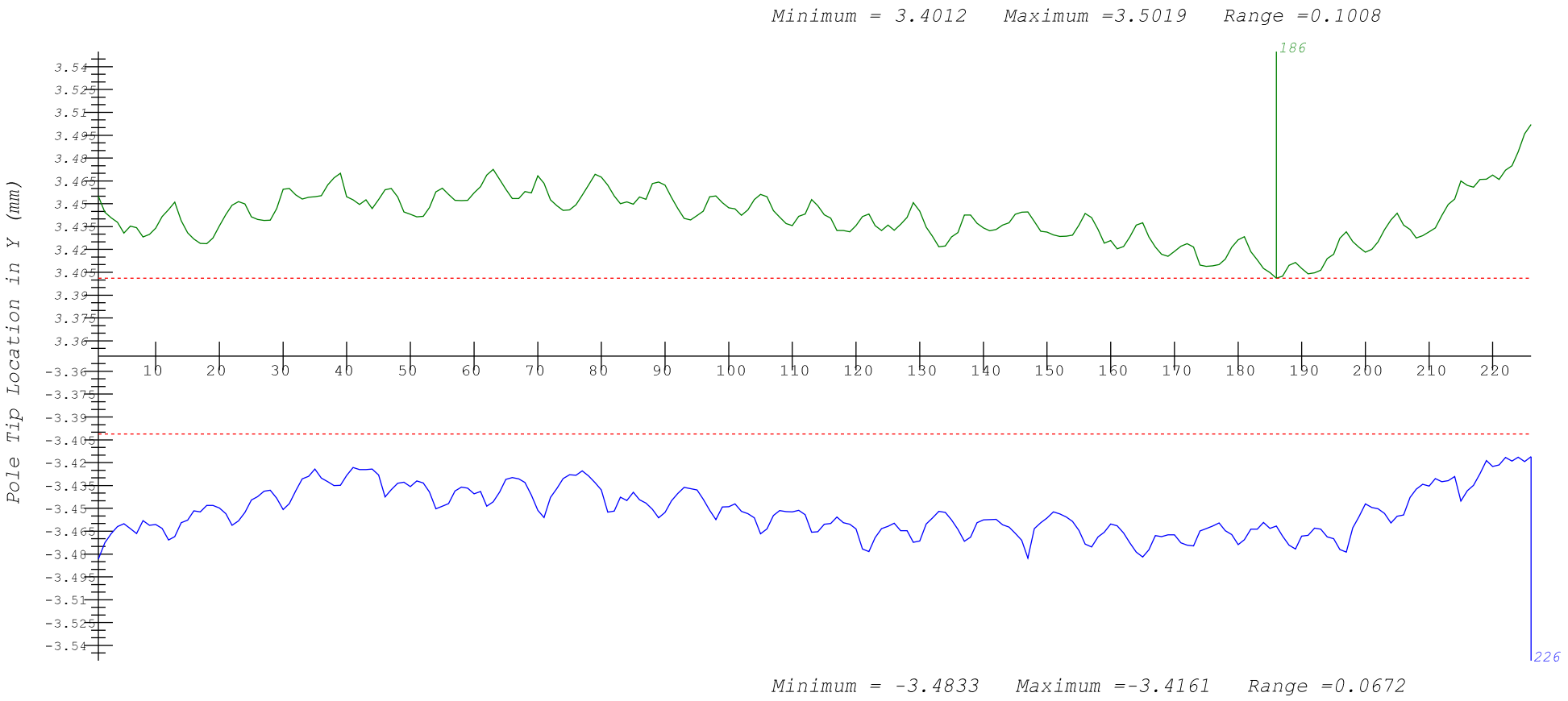


Minimum = -0.0329 Maximum =0.0429 Range =0.0758 Mean =-0.0052

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 Symmetery 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

SLAC LCLS-MMF LEITZ CMM	*Undulator Pole Tip Location* *Post Magnetic Alignment*	*DATE:12-JAN-2009* *UNDULATOR # 13* *DATASET # 0017* *PROGRAM VERSION 2.7*

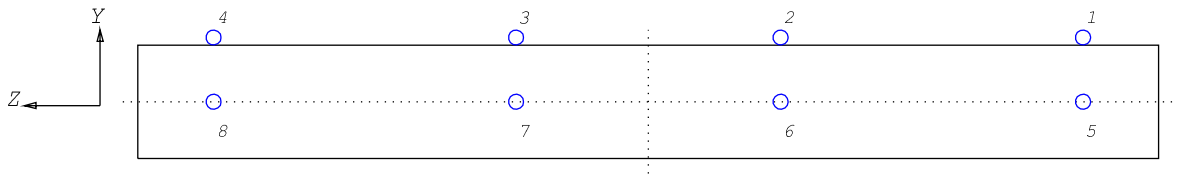
Maximum Chamber Gap = 6.8023



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 Magentic C\L (2*Min. Dev. from C\L)*

SLAC LCLS-MMF LEITZ CMM	*Undulator Pole Tip Location* *Post Magnetic Alignment*	*DATE:12-JAN-2009* *UNDULATOR # 13* *DATASET # 0017* *PROGRAM VERSION 2.7*

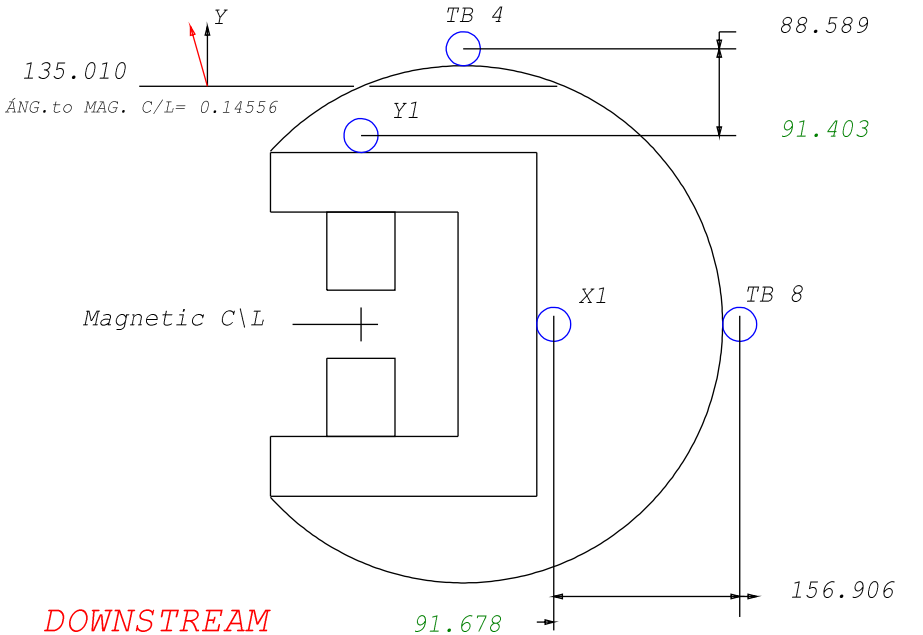


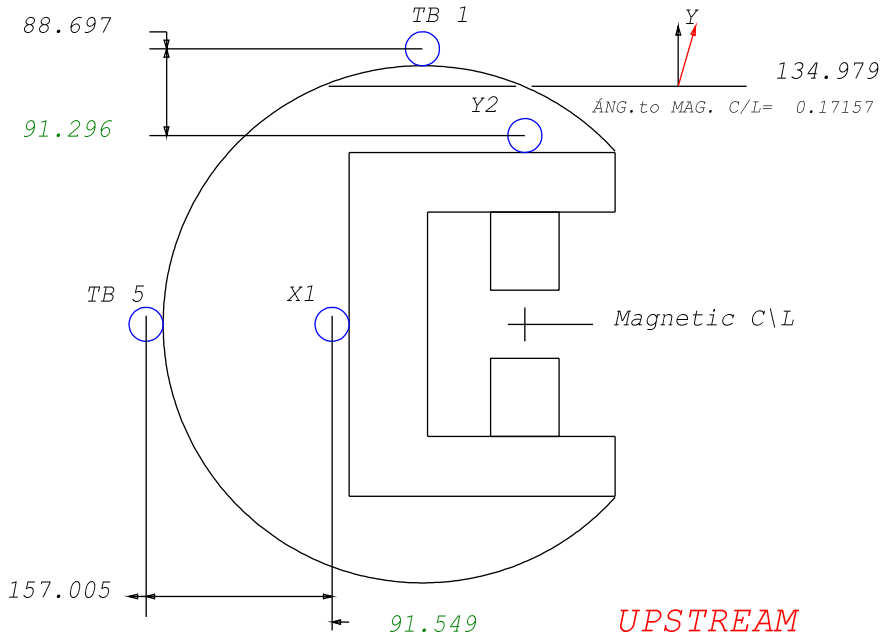
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	0.2250	179.9932	-1558.284
2	0.3726	180.0113	-584.4518
3	0.2710	179.8962	591.3053
4	0.2275	179.9918	1562.0763
5	248.5542	0.0765	-1558.330
6	248.5198	-0.0247	-584.6006
7	248.5401	0.0415	591.3263
8	248.5838	-0.0629	1562.0849

	C\L Offset	Length
Top Magnetic Structure	-0.096	3381.052
Bottom Magnetic Structure	0.096	3381.276
Strongback	0.251	3399.780

Dimensions in mm Angles in mrad





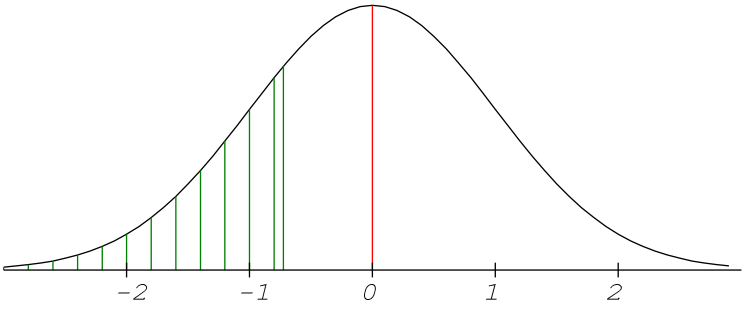
SLAC
LCLS-MMF
LEITZ CMM

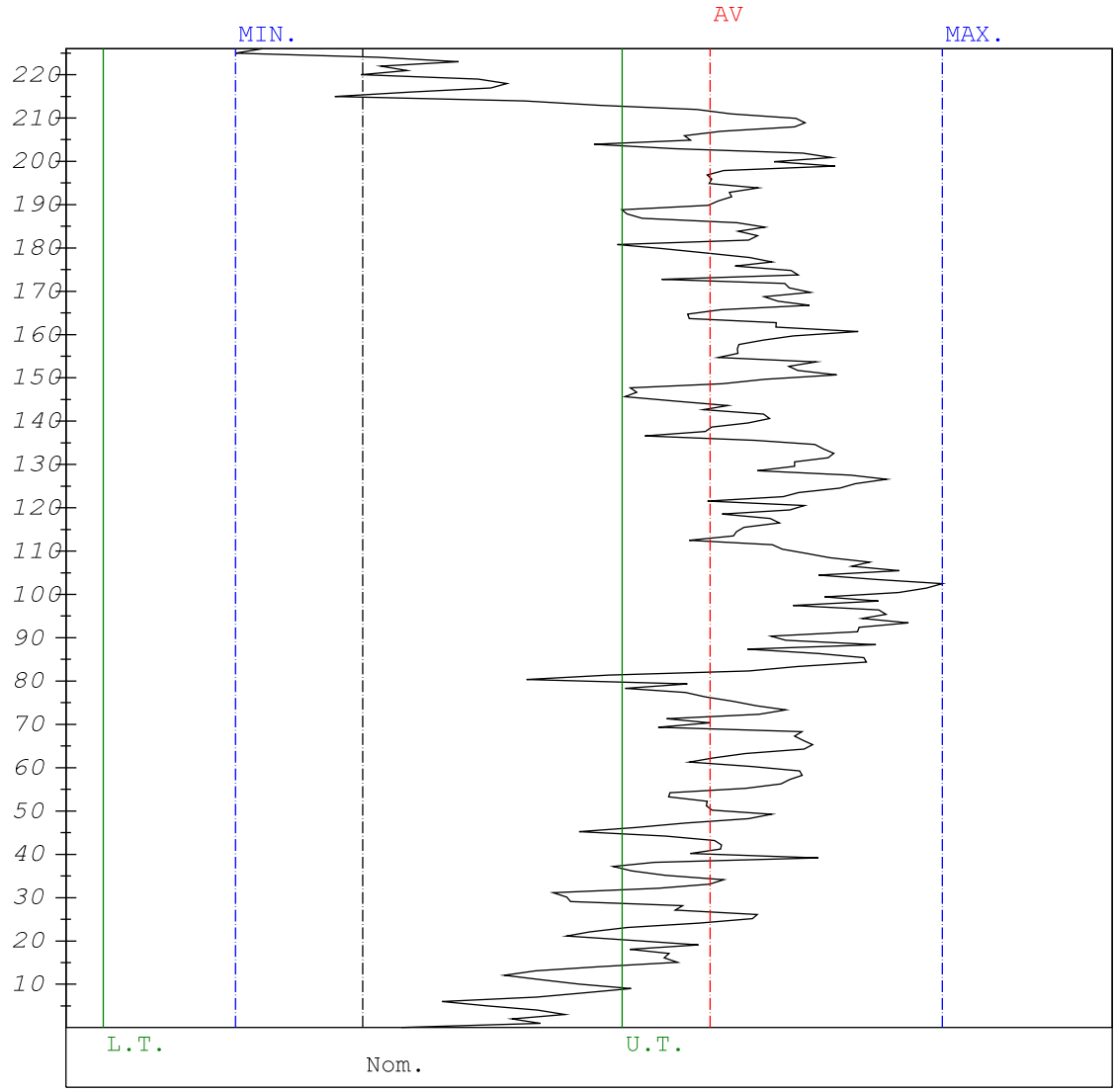
Undulator Dimensional Fiducialization
Post Magnetic Alignment

DATE:12-JAN-2009

UNDULATOR # 13
DATASET # 0017

PROGRAM VERSION 2.7





Nominal : 4.5000	Averag :5.1693	Cent.-Dev. :0.6693
Up. Tol. :0.5	Maximum : 5.6163	U.Tol.Ex. > : 76.5 %
Low.Tol. :-0.5	Minimum : 4.2550	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.2341	In Tolerance: 23.5 %
Outlier : 0	Distribution : NOR	Dimension : mrad

SLAC LCLS-MMF LEITZ CMM	Statistical Evaluation Pole Tip Gap Angle *Post Magnetic Alignment*	*DATE:12-JAN-2009* *UNDULATOR # 13* *DATASET # 0017* *PROGRAM VERSION 2.7*