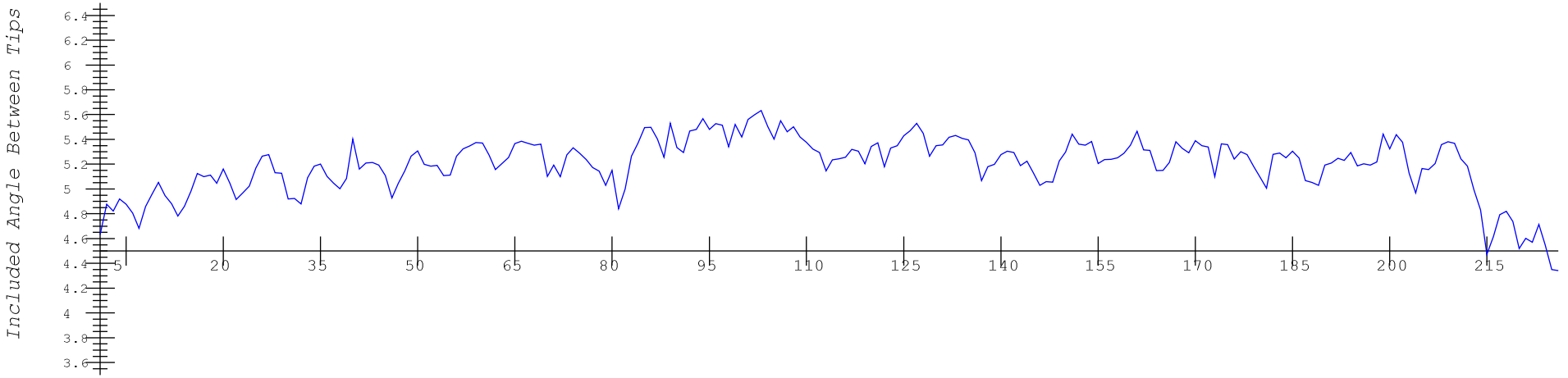
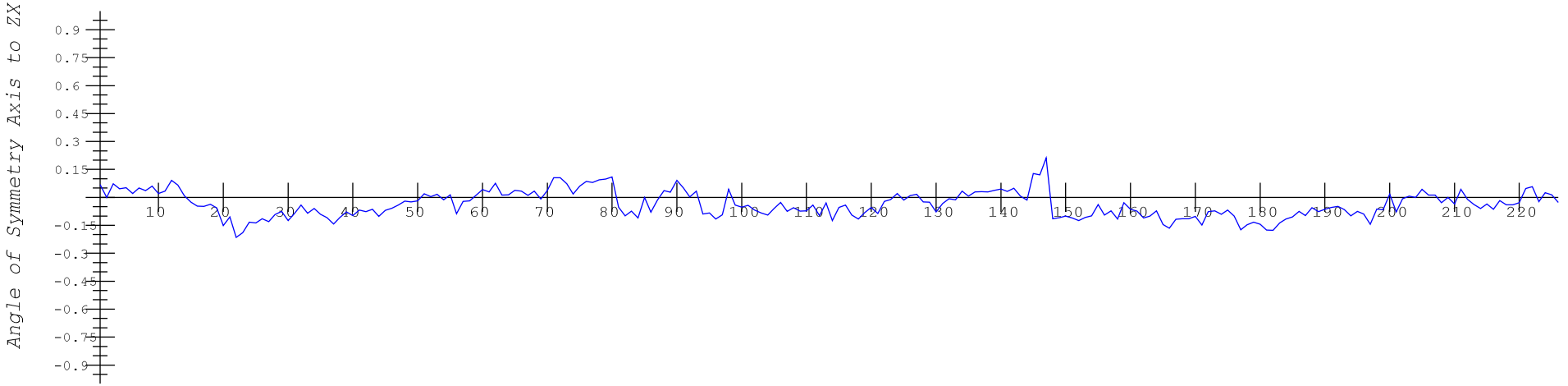


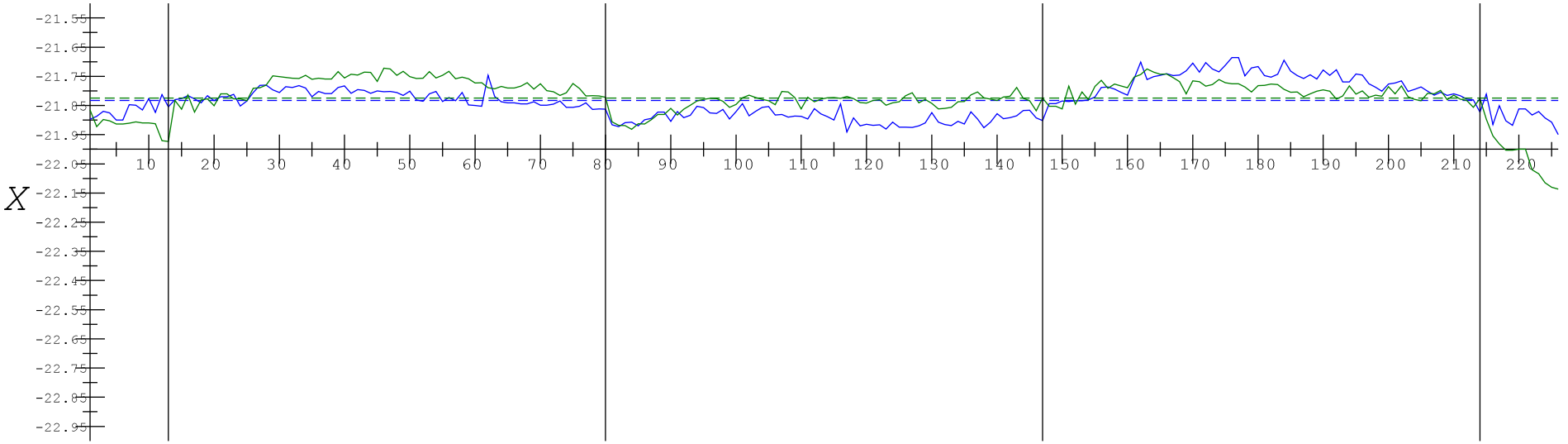
Pole Tip Number ---------->



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

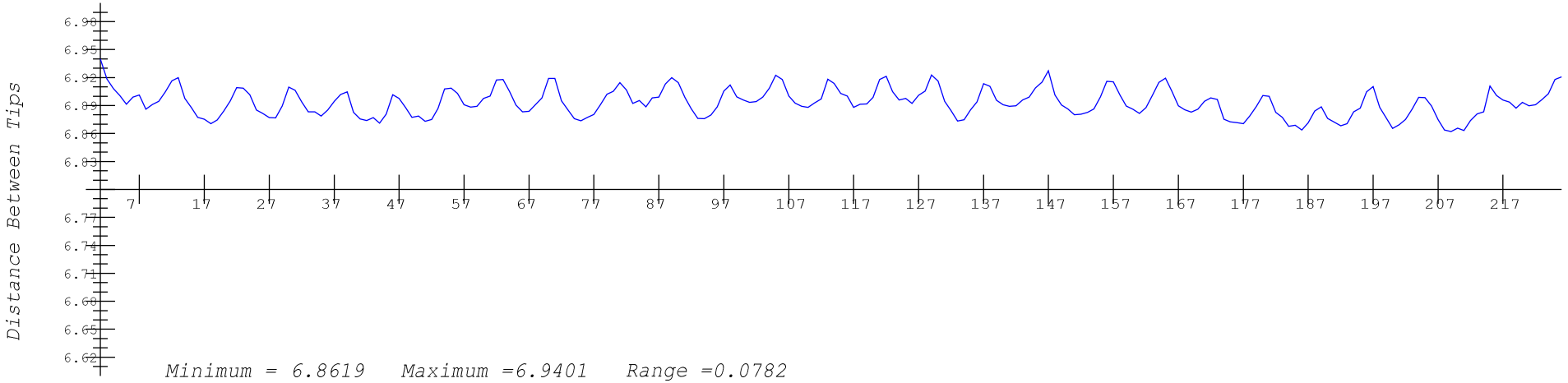
SLAC LCLS-MMF LEITZ CMM	*Undulator Pole Tip Angles* *Post Magnetic Alignment*	*DATE:11-JUL-2008* *UNDULATOR # 13* *DATASET # 0010* *PROGRAM VERSION 2.7*

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



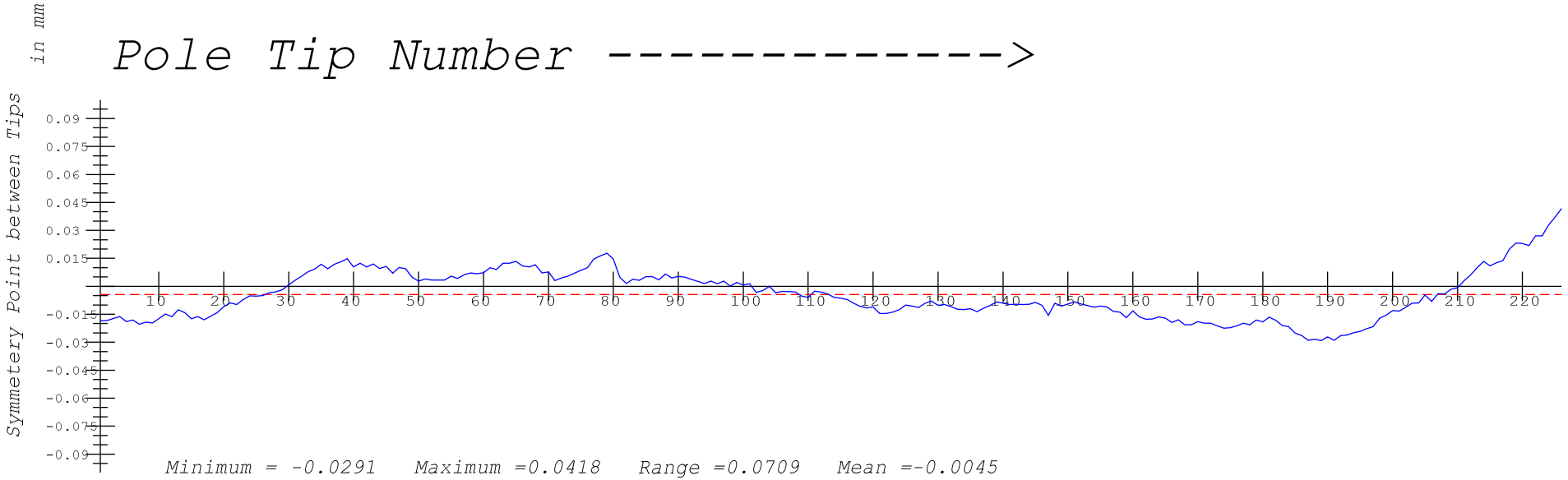
X values in mm
Green Solid = Point on front face of Upper Pole Tip 10mm above Magnetic C/L
Green Dash = Mean value of all Upper Pole Tips 10mm above Magnetic C/L Mean value Upper Pole Tips = -21.825
Blue Solid = Point on front face of Lower Pole Tip 10mm below Magnetic C/L
Blue Dash = Mean value of all Lower Pole Tips 10mm below Magnetic C/L Mean value Lower Pole Tips = -21.833

SLAC LCLS-MMF LEITZ CMM	Undulator Pole Tip Location Post Magnetic Alignment	DATE:11-JUL-2008 UNDULATOR # 13 DATASET # 0010 PROGRAM VERSION 2.7



Minimum = 6.8619 Maximum =6.9401 Range =0.0782

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

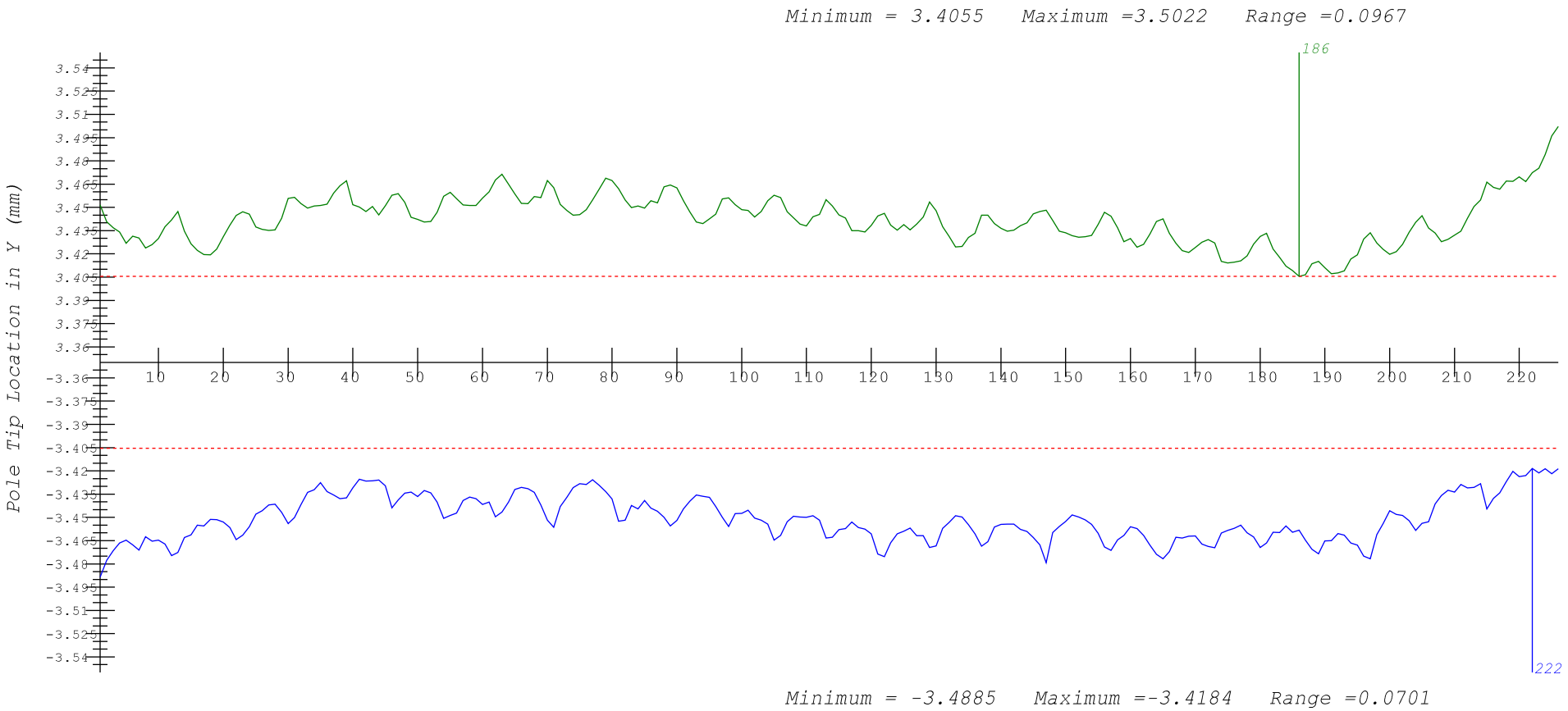


Minimum = -0.0291 Maximum =0.0418 Range =0.0709 Mean =-0.0045

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:11-JUL-2008* *UNDULATOR # 13* *DATASET # 0010* *PROGRAM VERSION 2.7*

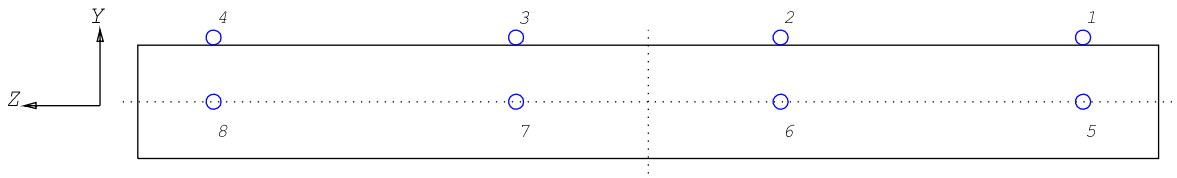
Maximum Chamber Gap = 6.8109



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:11-JUL-2008* *UNDULATOR # 13* *DATASET # 0010* *PROGRAM VERSION 2.7*

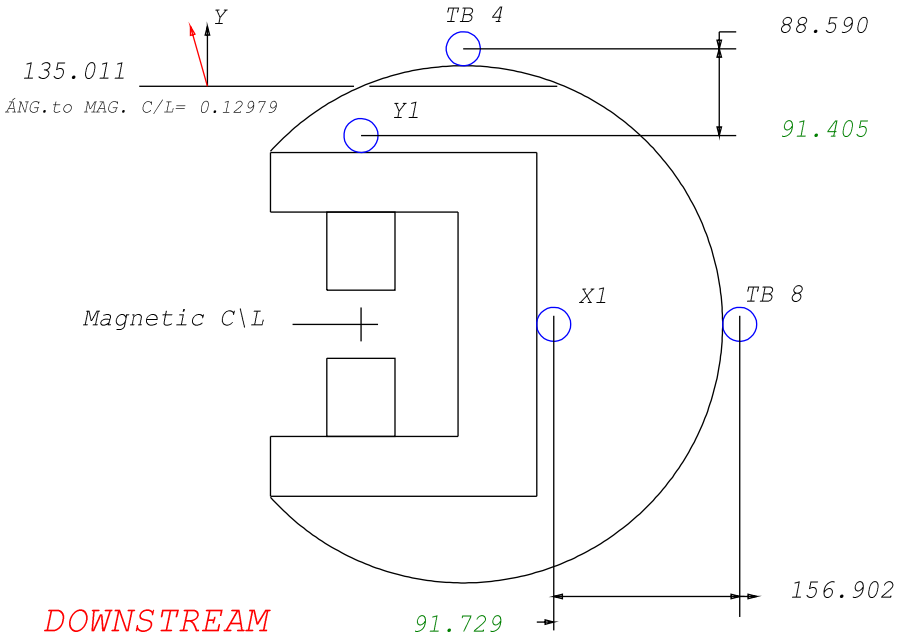


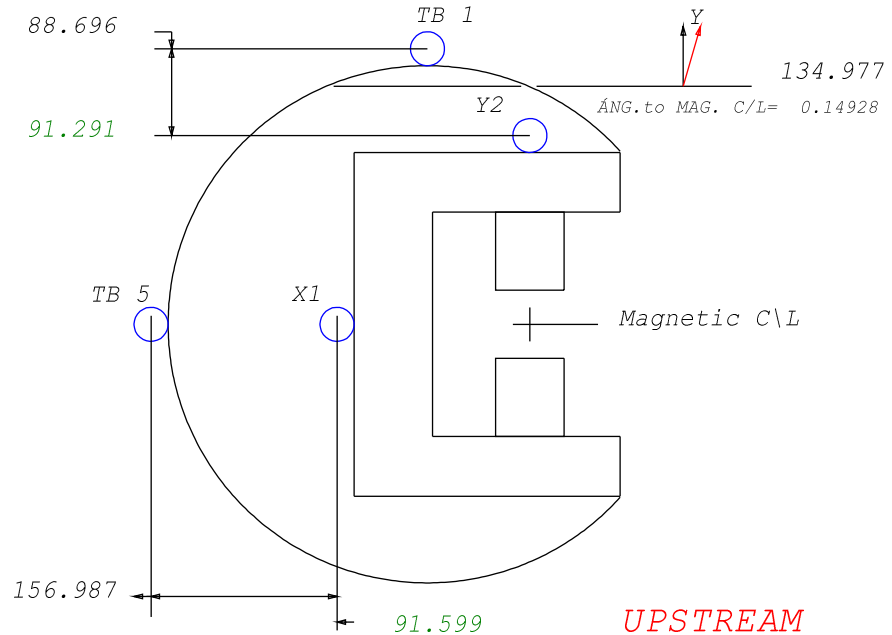
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	0.2579	179.9868	-1558.292
2	0.4077	180.0132	-584.4586
3	0.3075	179.9016	591.3038
4	0.2739	179.9948	1562.0798
5	248.5858	0.0787	-1558.326
6	248.5485	-0.0258	-584.6014
7	248.5740	0.0441	591.3242
8	248.6311	-0.0647	1562.0847

	C\L Offset	Length
Top Magnetic Structure	-0.096	3381.074
Bottom Magnetic Structure	0.096	3381.297
Strongback	0.252	3399.796

Dimensions in mm Angles in mrad





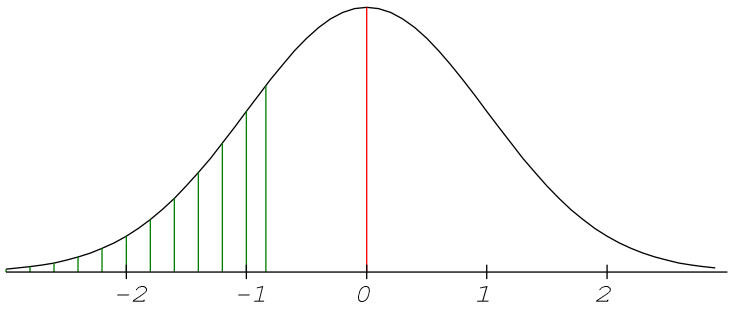
SLAC
LCLS-MMF
LEITZ CMM

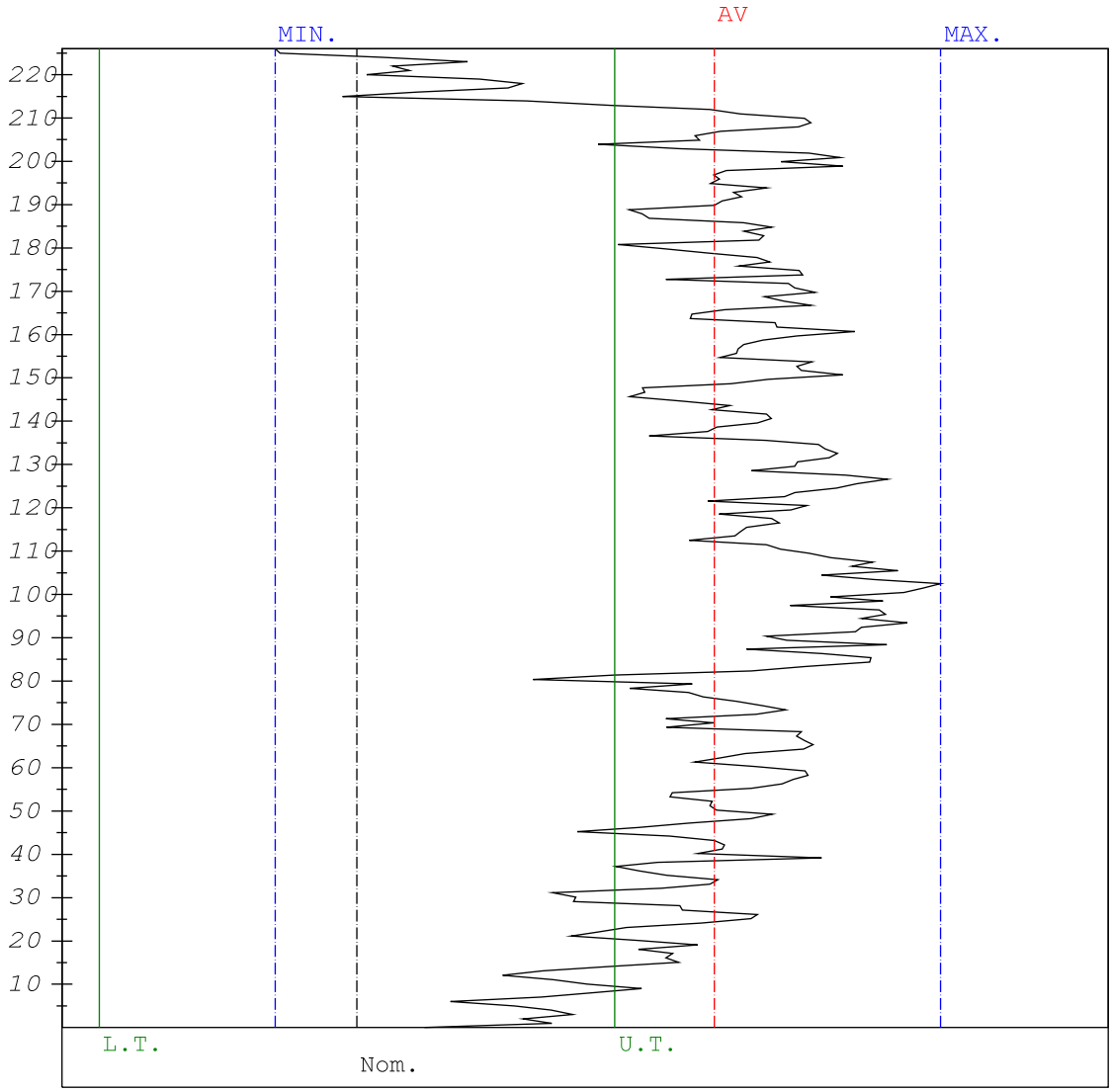
Undulator Dimensional Fiducialization
Post Magnetic Alignment

DATE:11-JUL-2008

UNDULATOR # 13
DATASET # 0010

PROGRAM VERSION 2.7





Nominal : 4.5000	Averag :5.1934	Cent.-Dev. :0.6934
Up. Tol. :0.5	Maximum : 5.6327	U.Tol.Ex. > : 79.9 %
Low.Tol. :-0.5	Minimum : 4.3417	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.2306	In Tolerance: 20.1 %
Outlier : 0	Distribution : NOR	Dimension : mrad

SLAC LCLS-MMF LEITZ CMM	Statistical Evaluation Pole Tip Gap Angle *Post Magnetic Alignment*	*DATE:11-JUL-2008* *UNDULATOR # 13* *DATASET # 0010* *PROGRAM VERSION 2.7*