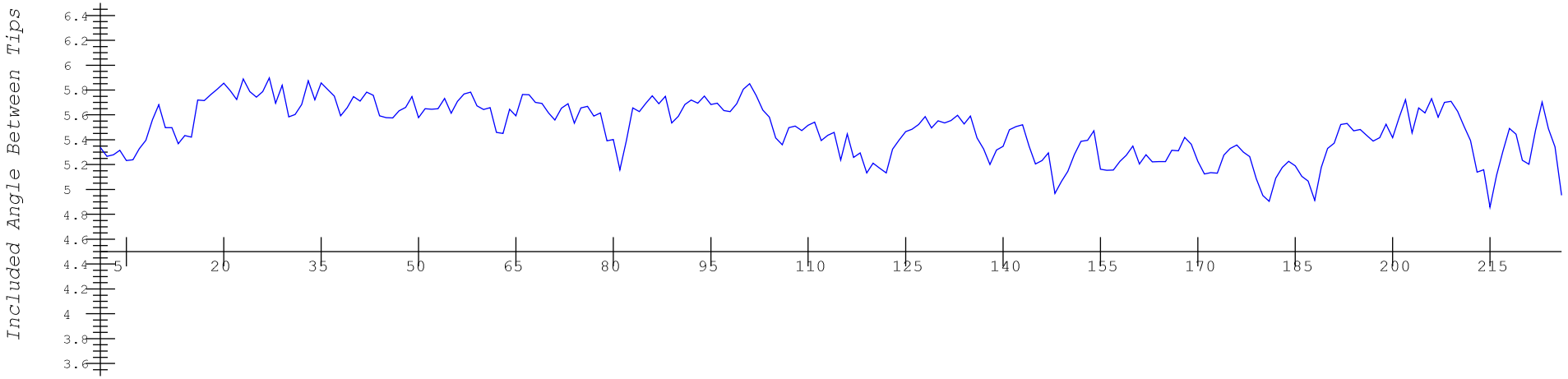
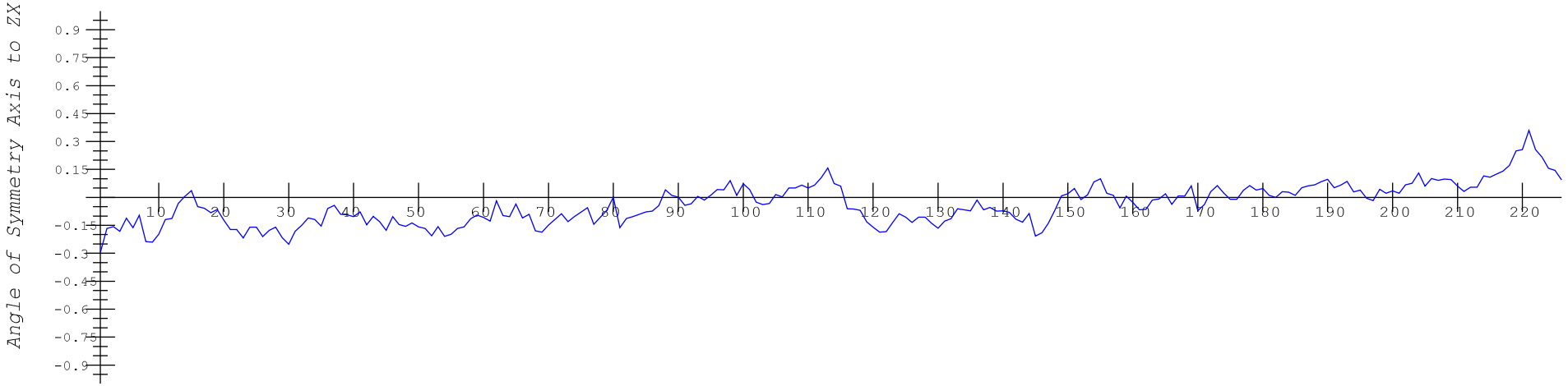


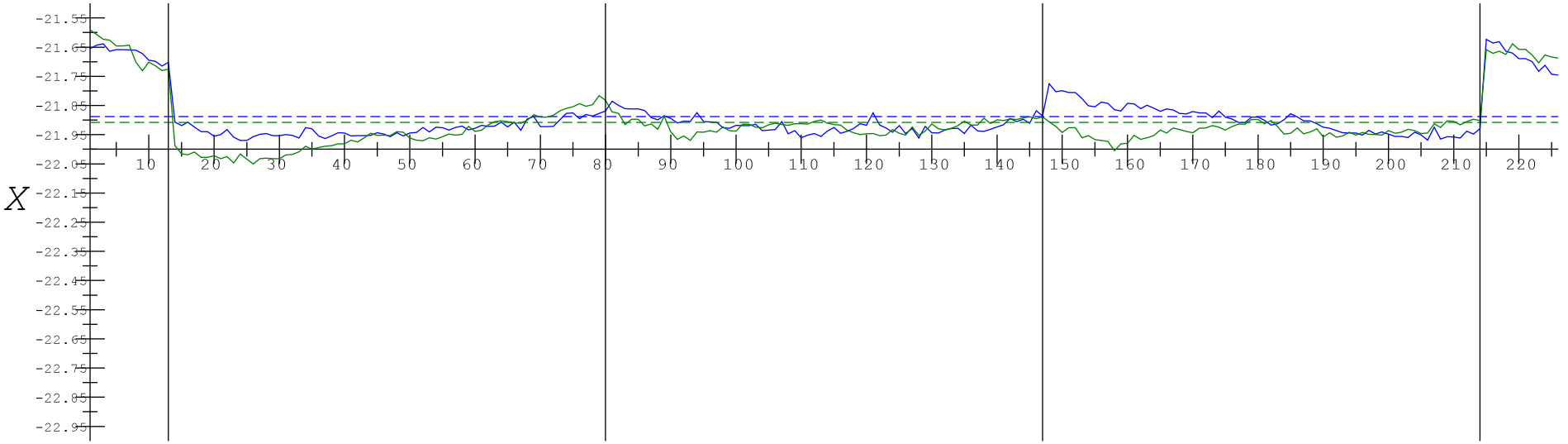
Pole Tip Number ---------->



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

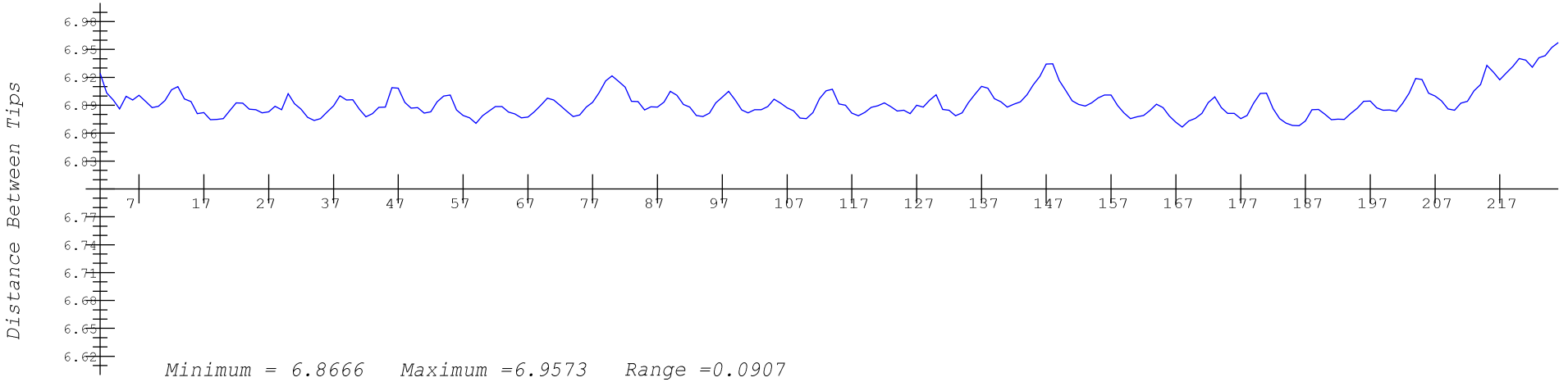
SLAC LCLS-MMF LEITZ CMM	*Undulator Pole Tip Angles* *Post Magnetic Alignment*	*DATE:11-MAR-2008* *UNDULATOR # 16* *DATASET # 0001* *PROGRAM VERSION 2.6*

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



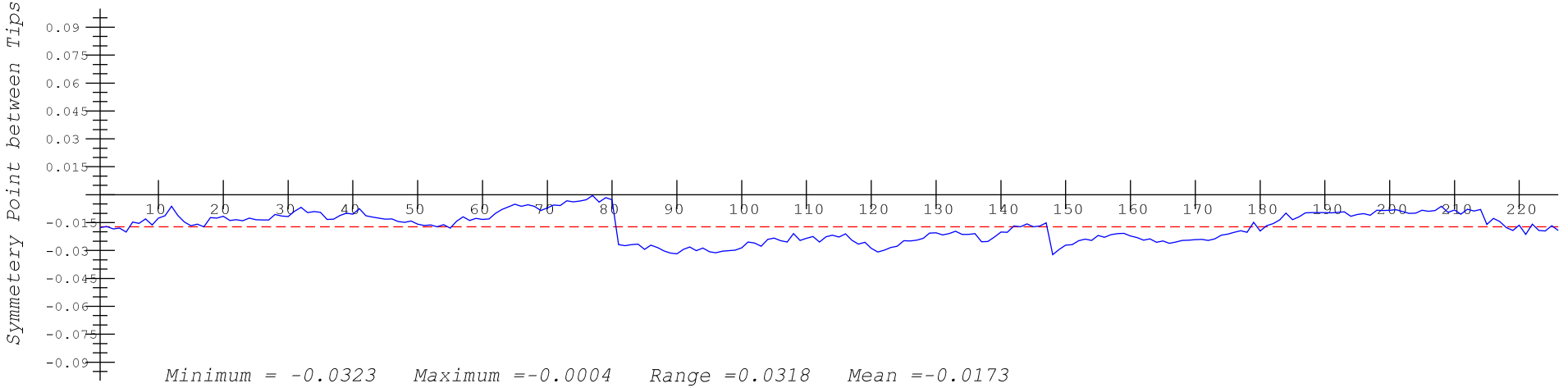
X values in mm
Green Solid = Point on front face of Upper Pole Tip 10mm above Magnetic C/L
Green Dash = Mean value of all Upper Pole Tips 10mm above Magnetic C/L Mean value Upper Pole Tips = -21.909
Blue Solid = Point on front face of Lower Pole Tip 10mm below Magnetic C/L
Blue Dash = Mean value of all Lower Pole Tips 10mm below Magnetic C/L Mean value Lower Pole Tips = -21.888

SLAC LCLS-MMF LEITZ CMM	Undulator Pole Tip Location Post Magnetic Alignment	DATE:11-MAR-2008 UNDULATOR # 16 DATASET # 0001 PROGRAM VERSION 2.6



Minimum = 6.8666 Maximum =6.9573 Range =0.0907

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



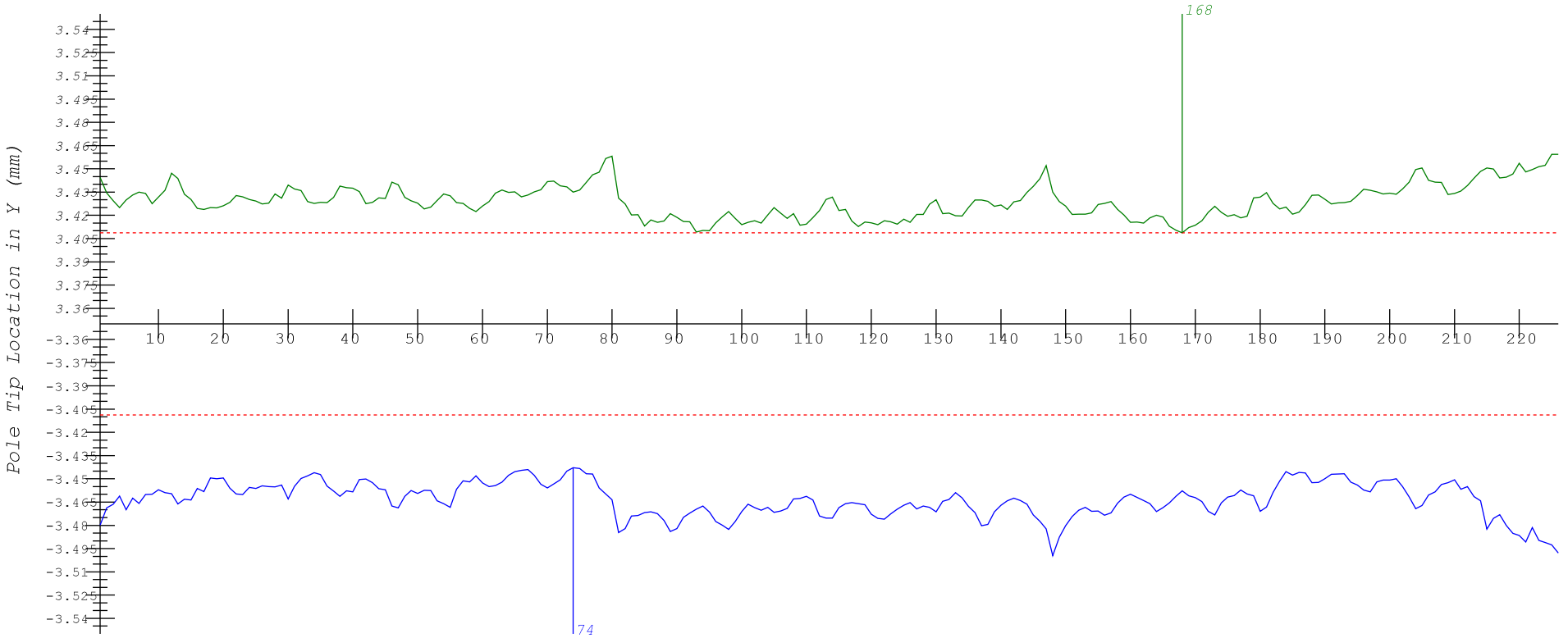
Minimum = -0.0323 Maximum =-0.0004 Range =0.0318 Mean =-0.0173

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-MAR-2008* *UNDULATOR # 16* *DATASET # 0001* *PROGRAM VERSION 2.6*

Maximum Chamber Gap = 6.8175

Minimum = 3.4088 Maximum =3.4595 Range =0.0507

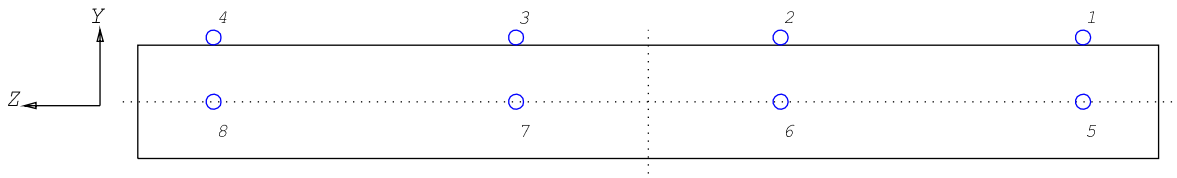


Minimum = -3.4995 Maximum =-3.4428 Range =0.0567

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-MAR-2008* *UNDULATOR # 16* *DATASET # 0001* *PROGRAM VERSION 2.6*

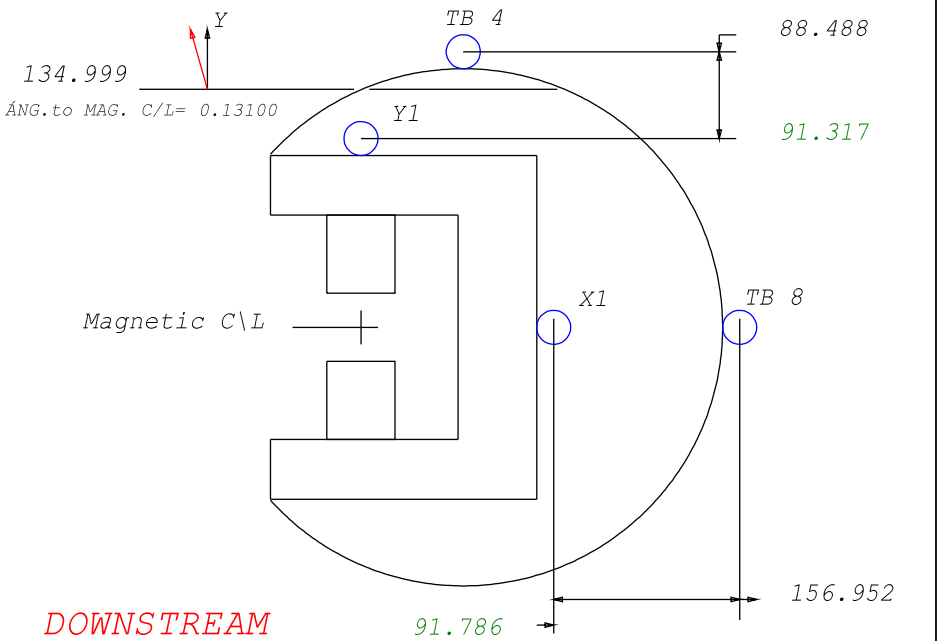


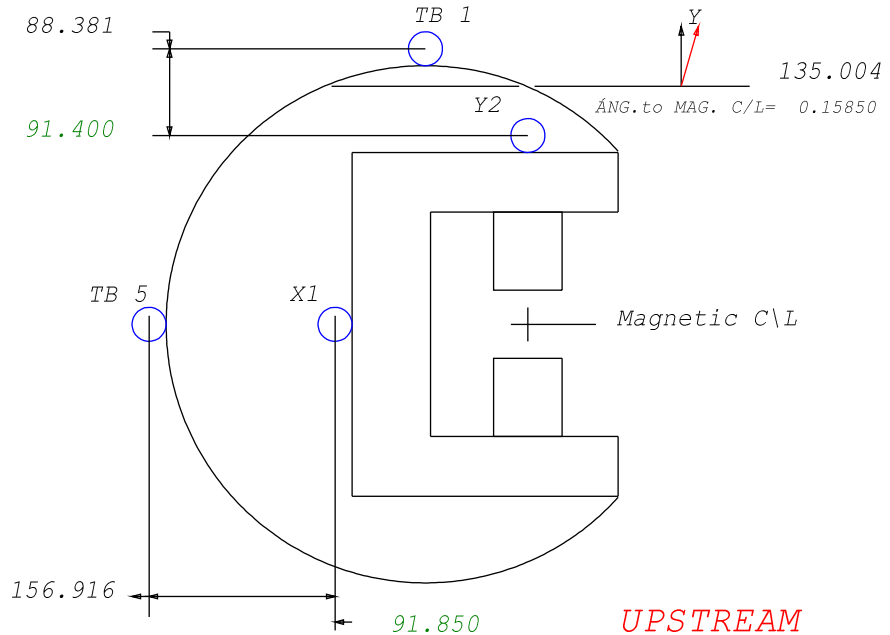
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	0.4355	179.7807	-1558.431
2	0.5580	179.6721	-584.7329
3	0.5479	179.7409	591.2295
4	0.5361	179.8049	1562.0180
5	248.7662	0.0665	-1558.345
6	248.7548	0.0679	-584.6813
7	248.7637	0.0500	591.3043
8	248.7378	0.0141	1562.1955

	C\L Offset	Length
Top Magnetic Structure	0.096	3381.419
Bottom Magnetic Structure	-0.096	3381.117
Strongback	0.240	3399.974

Dimensions in mm Angles in mrad





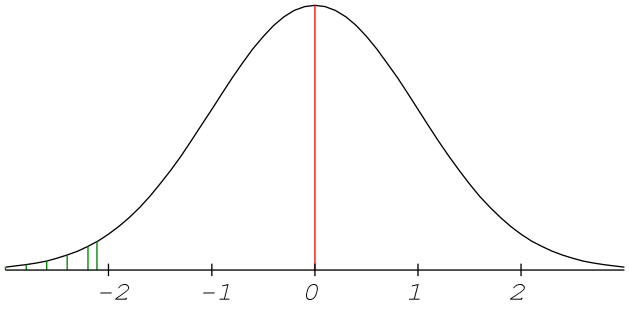
SLAC
LCLS-MMF
LEITZ CMM

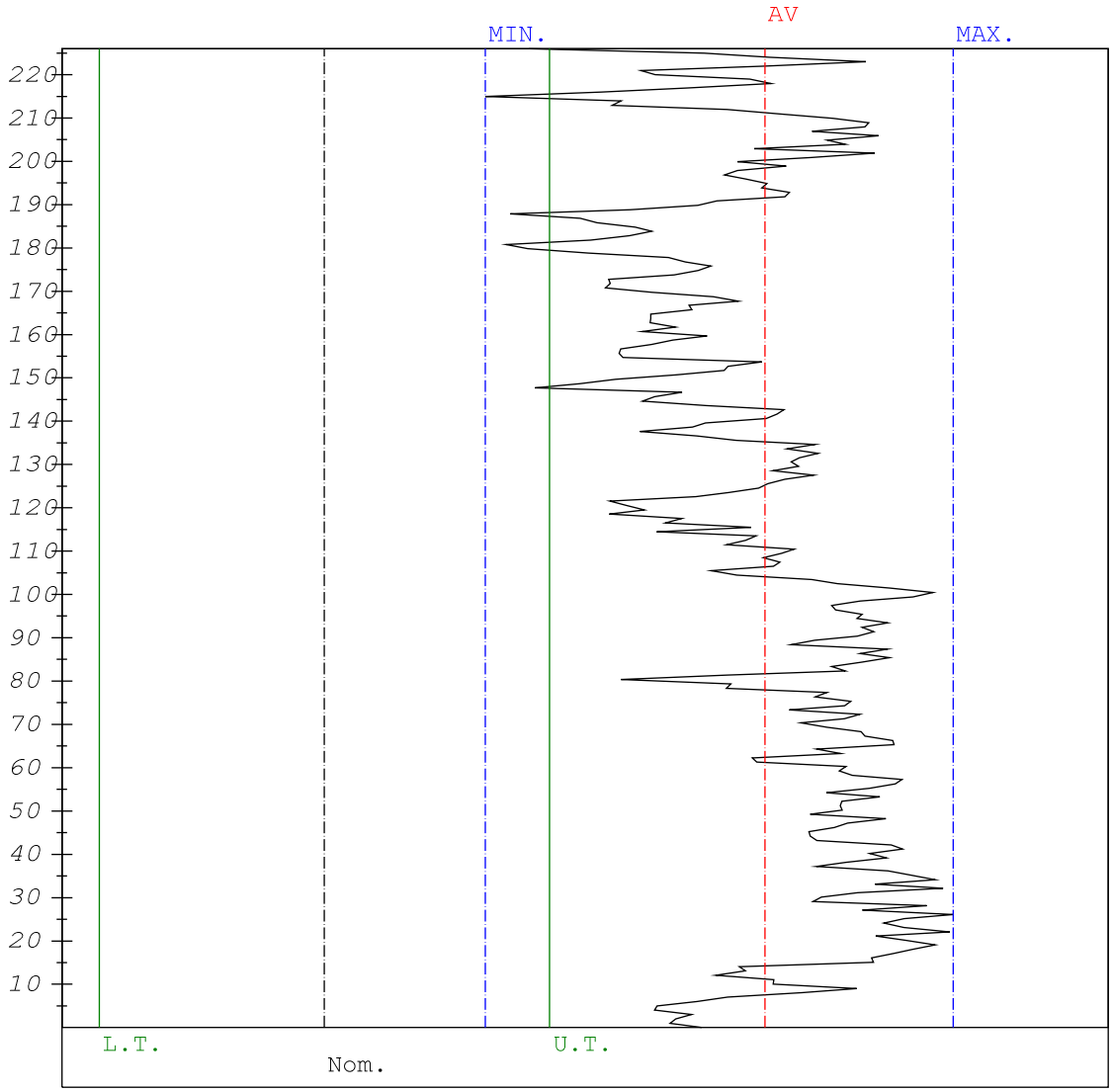
Undulator Dimensional Fiducialization
Post Magnetic Alignment

DATE:11-MAR-2008

UNDULATOR # 16
DATASET # 0001

PROGRAM VERSION 2.6





Nominal : 4.5000	Averag :5.478	Cent.-Dev. :0.978
Up. Tol. :0.5	Maximum : 5.8963	U.Tol.Ex. > : 98.3 %
Low.Tol. :-0.5	Minimum : 4.8576	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.2264	In Tolerance: 1.7 %
Outlier : 0	Distribution : NOR	Dimension : mrad

SLAC LCLS-MMF LEITZ CMM	Statistical Evaluation Pole Tip Gap Angle *Post Magnetic Alignment*	*DATE:11-MAR-2008* *UNDULATOR # 16* *DATASET # 0001* *PROGRAM VERSION 2.6*