

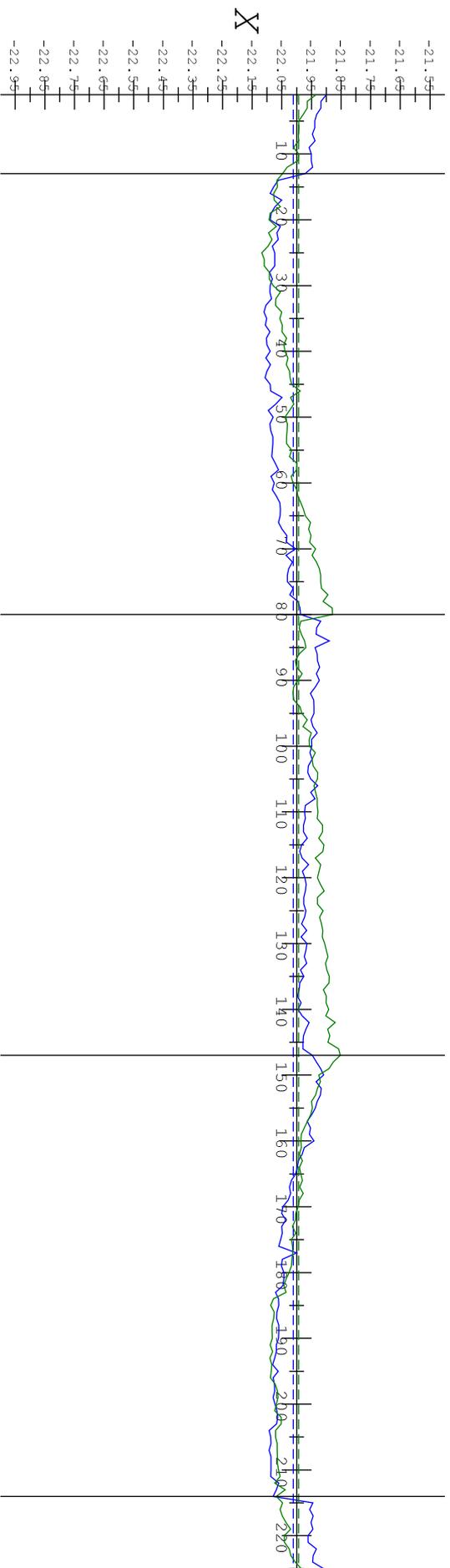
Symmetry Axis is the symmetry axis between the Upper and Lower Pole Tips  
 Included Angle is the angle between the Upper and Lower Pole Tips

**SLAC**  
 LCLS-MMF  
 LEITZ CMM

Undulator Pole Tip Angles  
 Post Magnetic Alignment

DATE: 18-JUN-2008  
 UNDUULATOR # 29  
 DATASET # 0002  
 PROGRAM VERSION 2.7

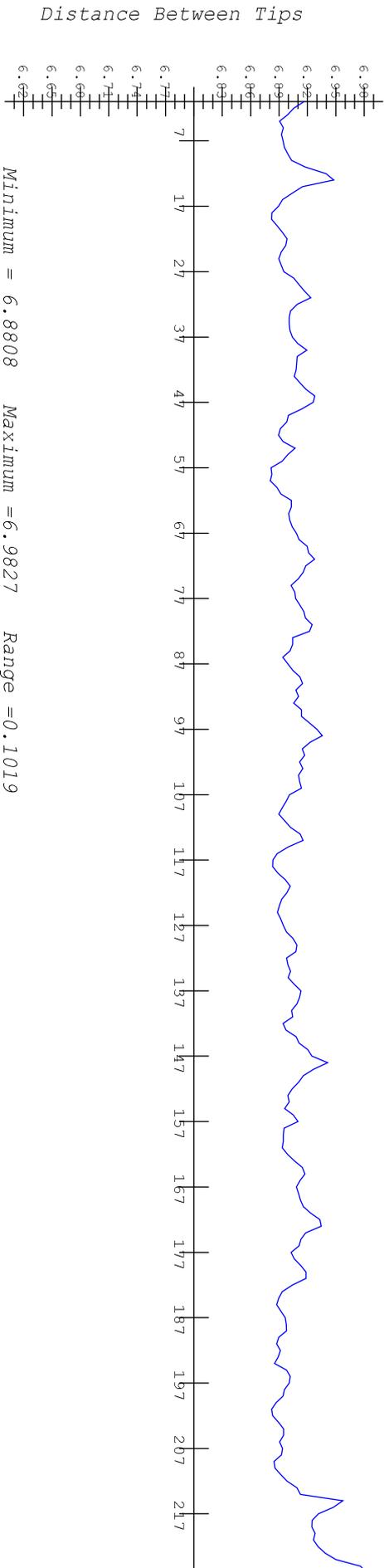
# Pole Tip Number ----->



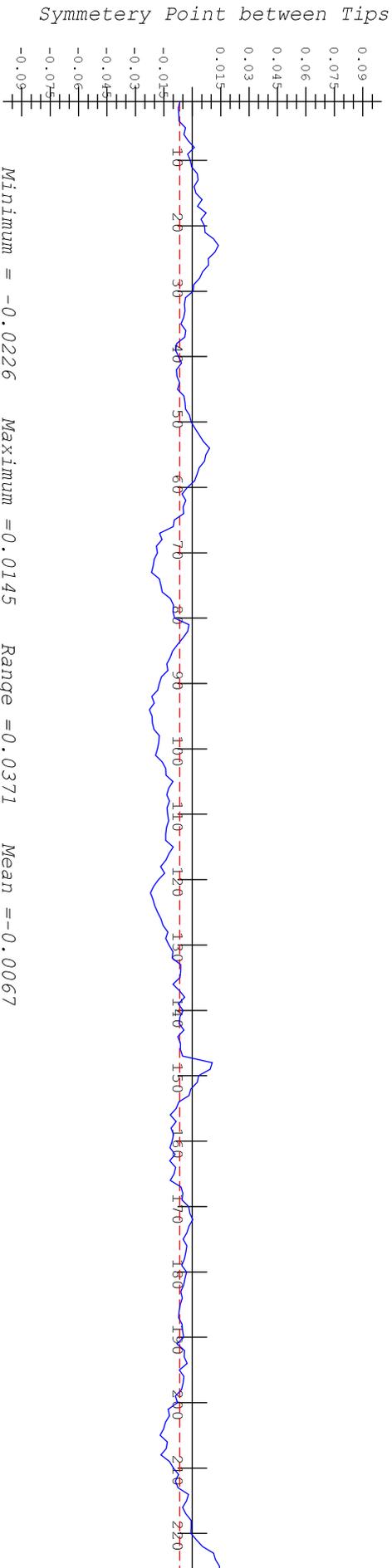
**SLAC**  
 LCLS-MMF  
 LEITZ CMM

Undulator Pole Tip Location  
 Post Magnetic Alignment

DATE: 18-JUN-2008  
 UNDUULATOR # 29  
 DATASET # 0002  
 PROGRAM VERSION 2.7



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

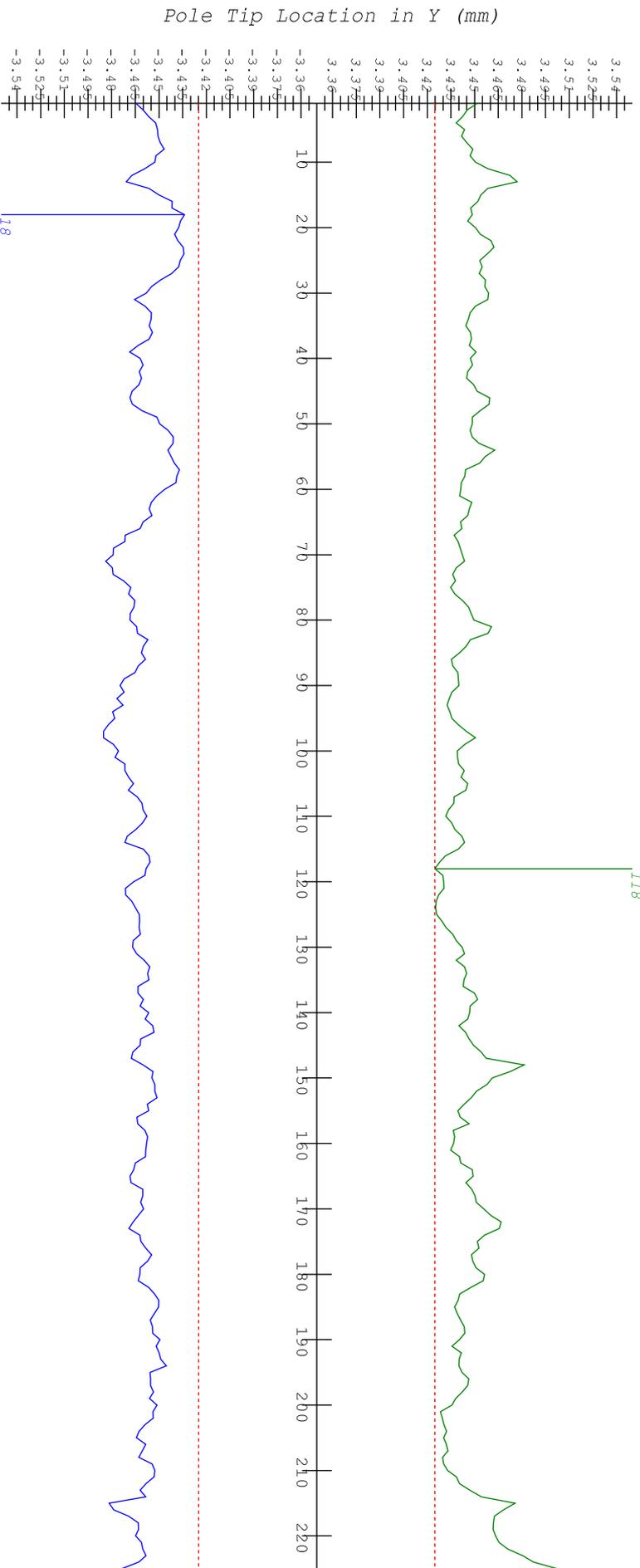
**SLAC**  
 LCLS-MMF  
 LEITZ CMM

Undulator Pole Tip Location  
 Post Magnetic Alignment

DATE: 18-JUN-2008  
 UNDUULATOR # 29  
 DATASET # 0002  
 PROGRAM VERSION 2.7

Maximum Chamber Gap = 6.8497

Minimum = 3.4248    Maximum = 3.5059    Range = 0.0811



Minimum = -3.4852    Maximum = -3.4338    Range = 0.0513

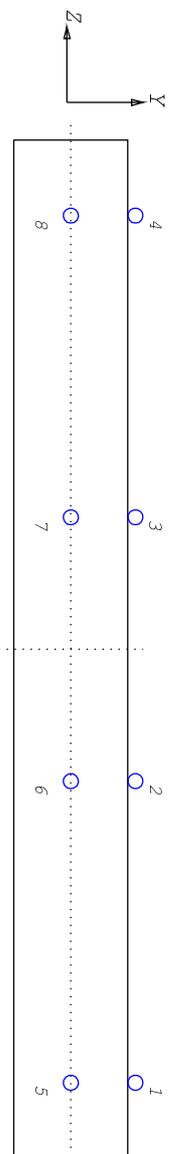
Pole Tip Number ----->

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)

**SLAC**  
LCLS-MMF  
LEITZ CMM

Undulator Pole Tip Location  
Post Magnetic Alignment

DATE: 18-JUN-2008  
UNDULATOR # 29  
DATASET # 0002  
PROGRAM VERSION 2.7



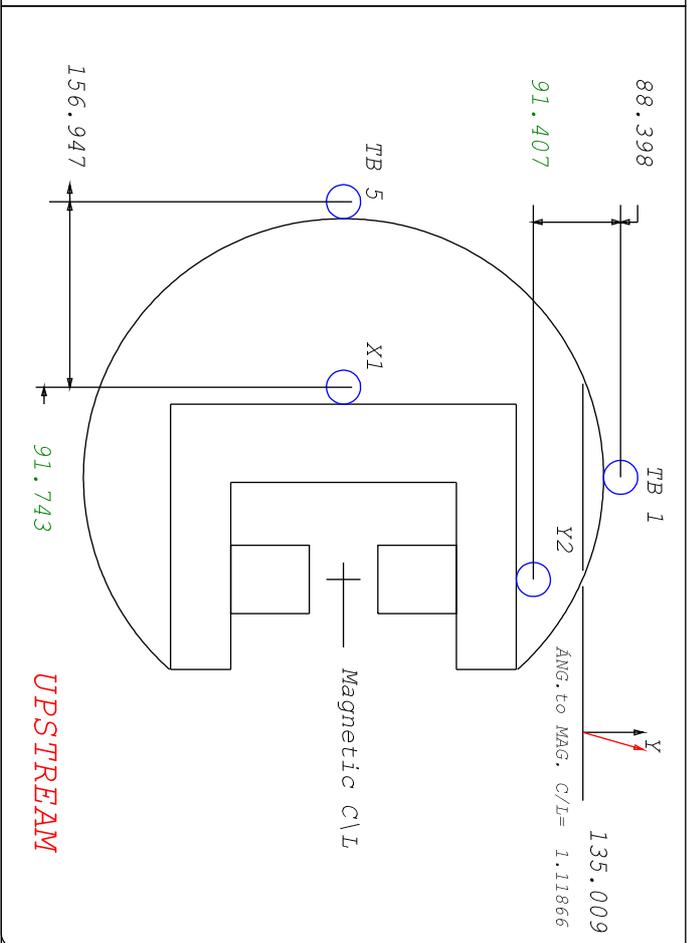
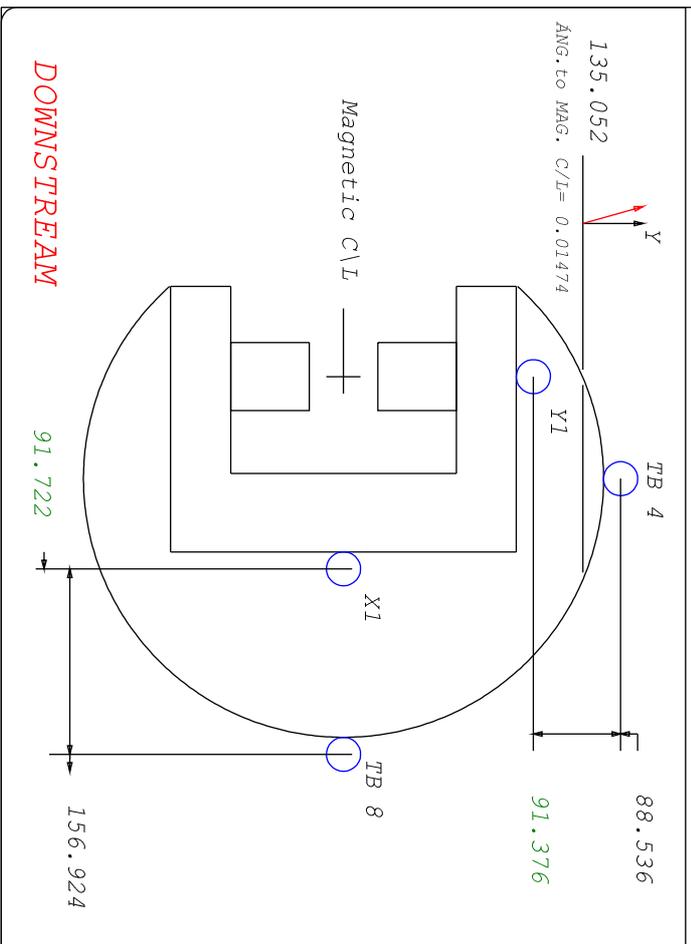
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	0.2838	179.8050	-1558.268
2	0.4509	179.7628	-584.6946
3	0.5546	179.8165	591.3135
4	0.5095	179.9121	1562.1778
5	248.6895	0.1369	-1558.317
6	248.6498	0.0552	-584.6721
7	248.6866	0.1597	591.3266
8	248.6463	0.1073	1562.2266

	C/L Offset	Length
Top Magnetic Structure	0.000	3380.966
Bottom Magnetic Structure	0.000	3381.175
Strongback	0.313	3399.990

Dimensions in mm

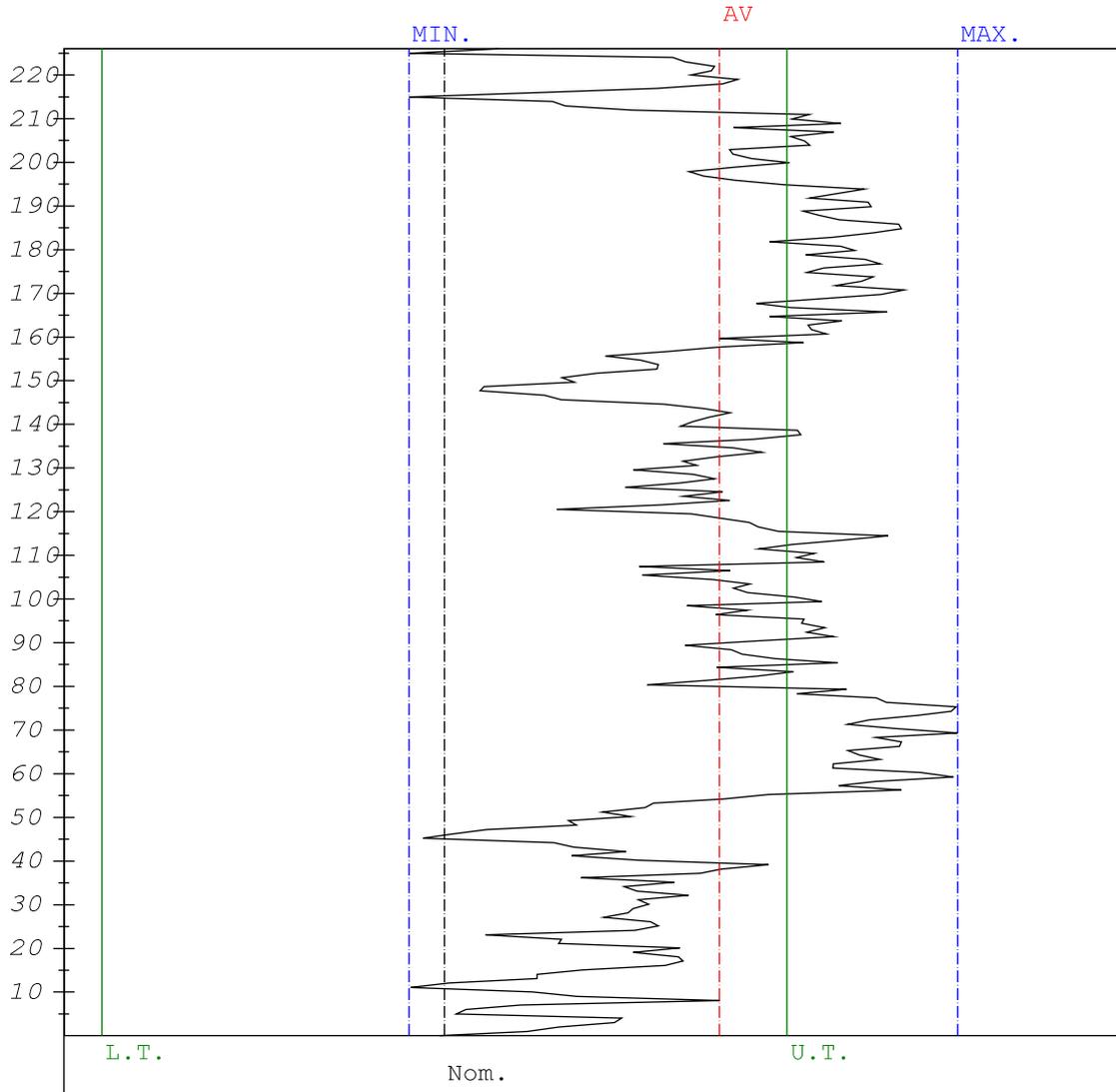
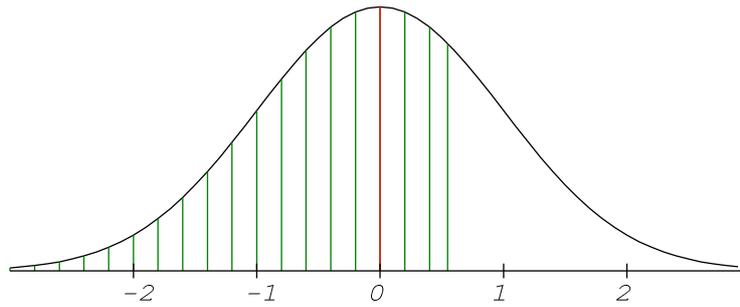
Angles in mrad



**SLAC**  
LCLS-MMF  
LEITZ CMM

Undulator Dimensional Fiducialization  
Post Magnetic Alignment

DATE: 18-JUN-2008  
UNDULATOR # 29  
DATASET # 0002  
PROGRAM VERSION 2.7



Nominal : 4.5000	Averag : 4.9017	Cent.-Dev. : 0.4017
Up. Tol. : 0.5	Maximum : 5.2496	U.Tol.Ex. > : 29.3 %
Low.Tol. : -0.5	Minimum : 4.4484	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.1800	In Tolerance: 70.7 %
Outlier : 0	Distribution : NOR	Dimension : mrad

**SLAC**  
 LCLS-MMF  
 LEITZ CMM

Statistical Evaluation  
 Pole Tip Gap Angle  
 Post Magnetic Alignment

DATE:18-JUN-2008  
 UNDULATOR # 29  
 DATASET # 0002  
 PROGRAM VERSION 2.7