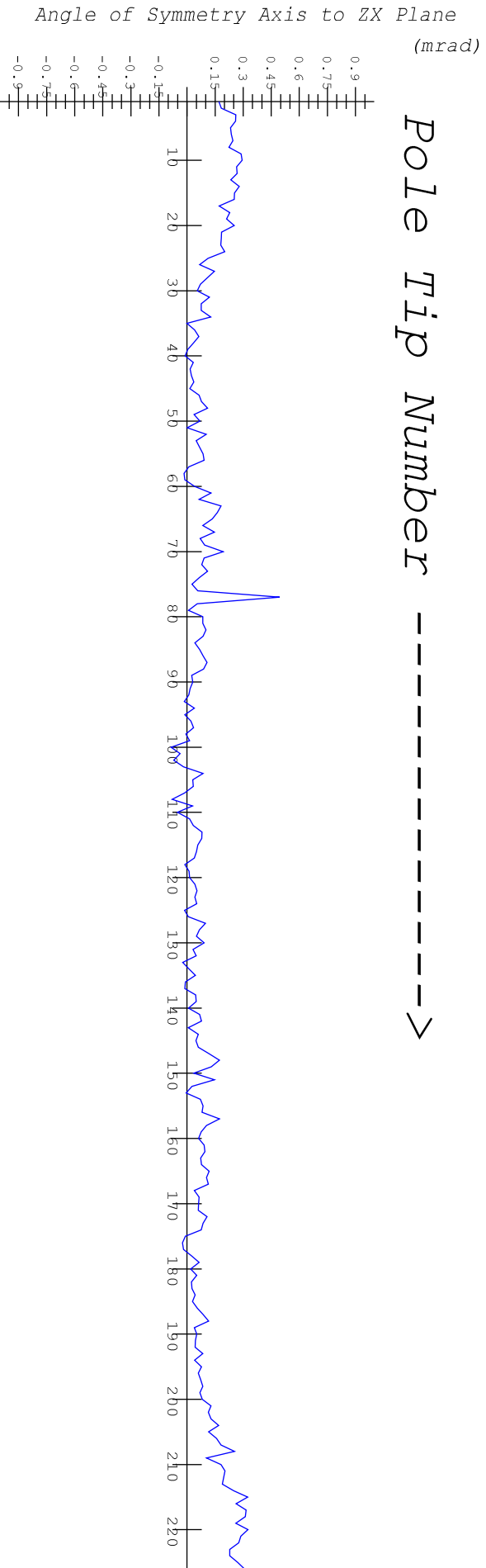


Pole Tip Number ----->



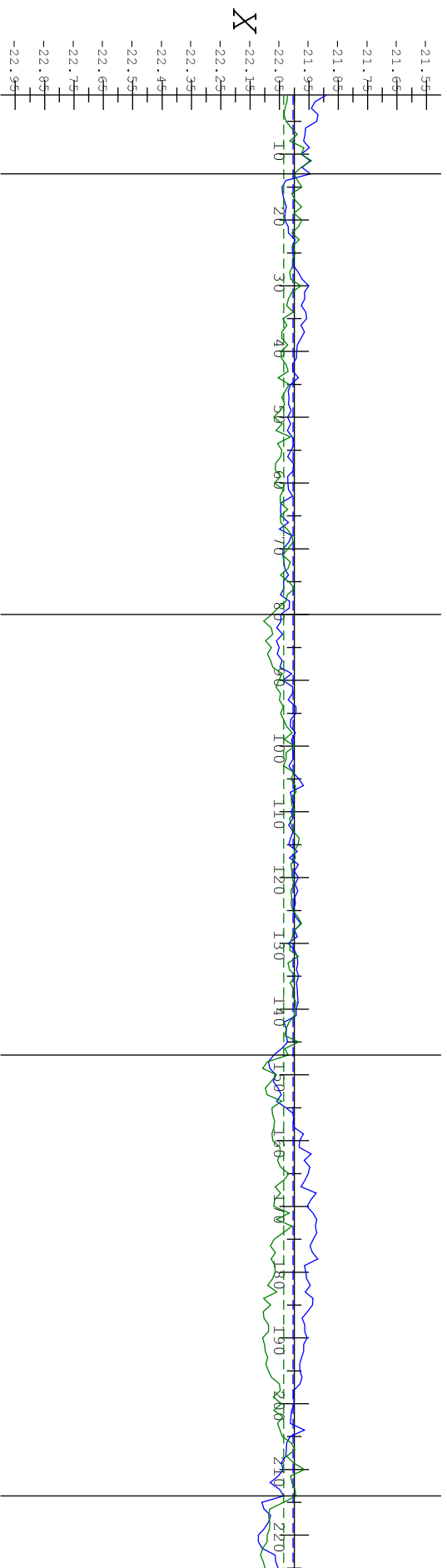
Symmetry Axis is the symmetry axis between the Upper and Lower Pole Tips  
 Included Angle is the angle between the Upper and Lower Pole Tips

**SLAC**  
 LCLS-MMF  
 LEITZ CMM

Undulator Pole Tip Angles  
 TWIST TEST WITH FLAT FEET

DATE: 12-OCT-2007  
 UNDUULATOR # 37  
 DATASET # 0001  
 PROGRAM VERSION 2.3

# Pole Tip Number ----->

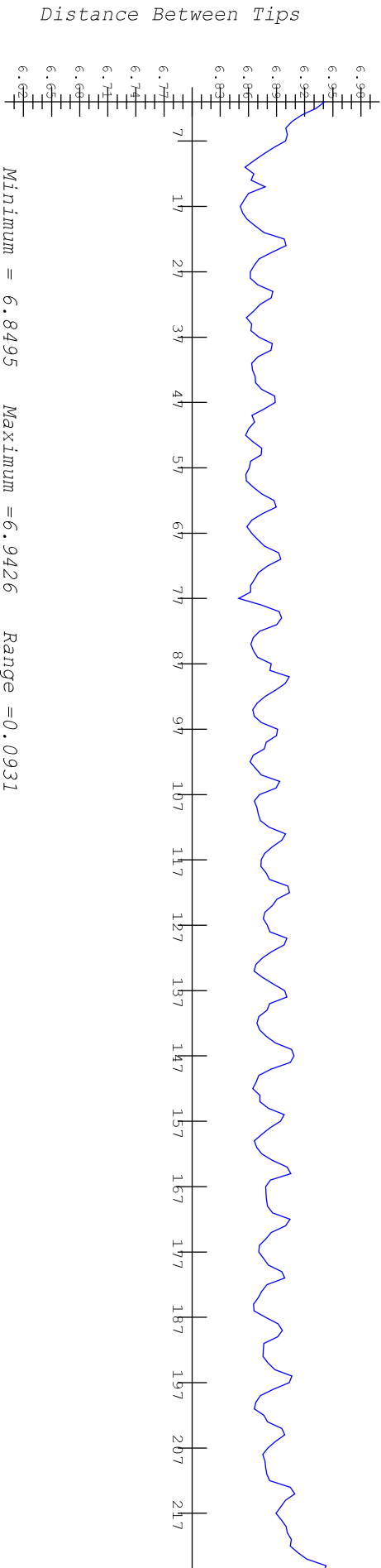


X values in mm

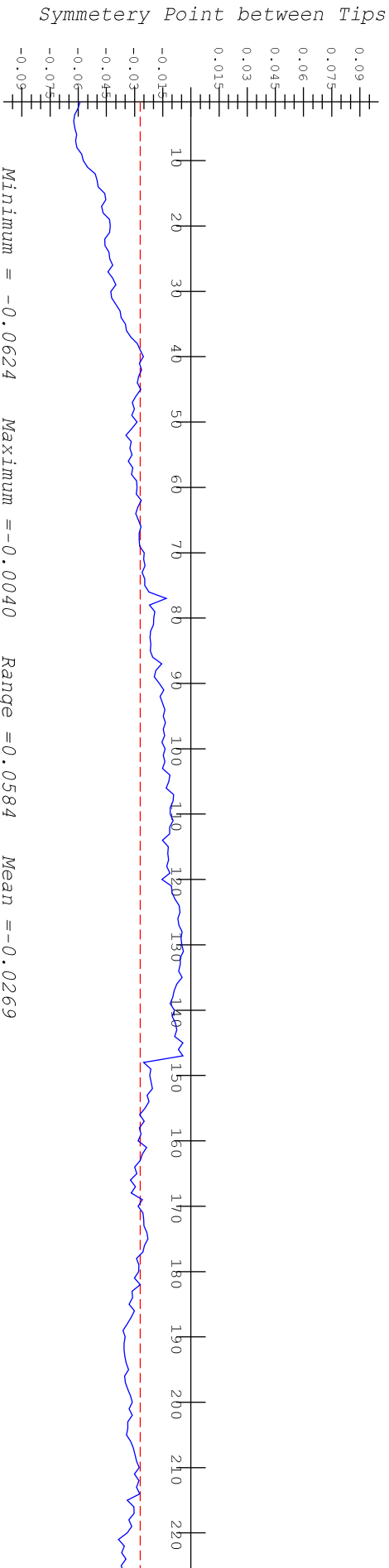
Green Solid = Point on front face of Upper Pole Tip 10mm above Magnetic C/L  
 Green Dash = Mean value of all Upper Pole Tips 10mm above Magnetic C/L Mean value Upper Pole Tips = -22.036

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 = -22.004

<p><b>SLAC</b>          LCLS-MMF          LEITZ CMM</p>	<p>Undulator Pole Tip Location          TWIST TEST WITH FLAT FEET</p>	<p>DATE: 12-OCT-2007          UNDULATOR # 37          DATASET # 0001          PROGRAM VERSION 2.3</p>
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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

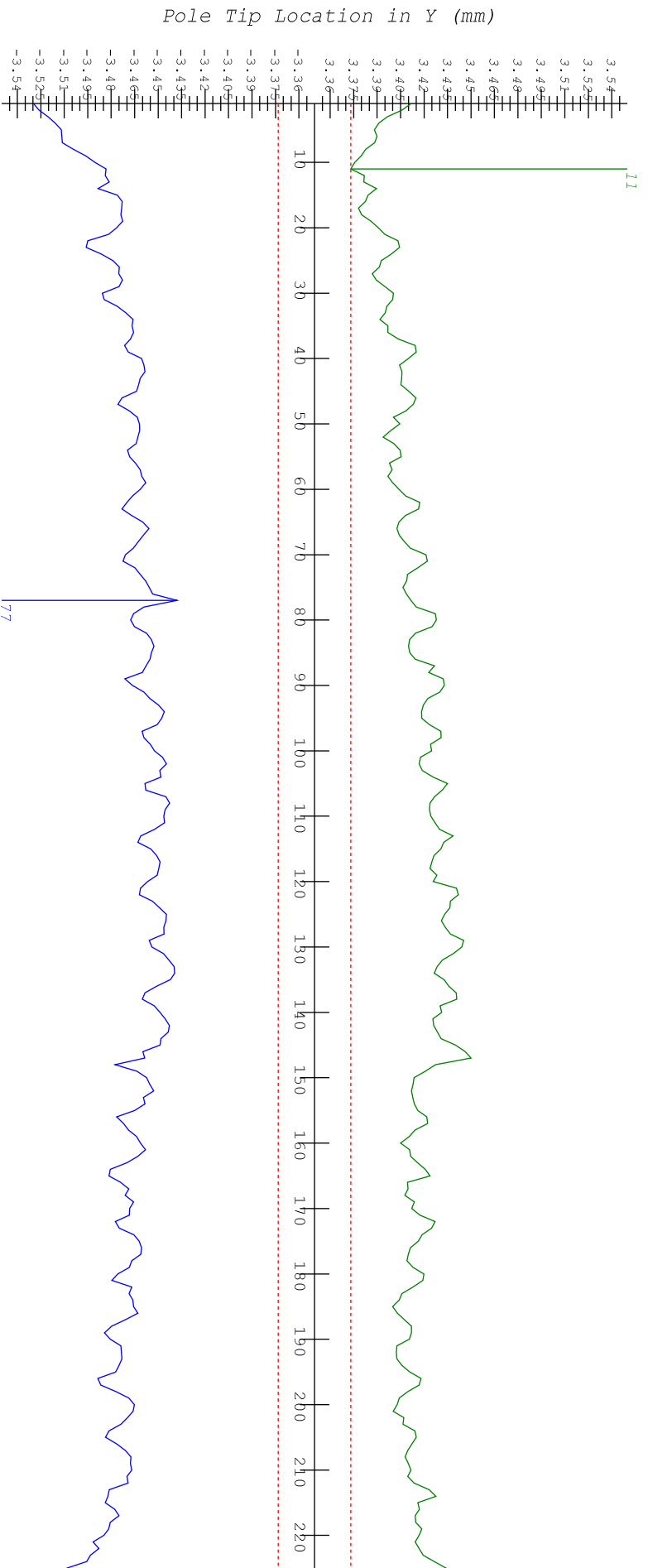
**SLAC**  
 LCLS-MMF  
 LEITZ CMM

Undulator Pole Tip Location  
 TWIST TEST WITH FLAT FEET

DATE: 12-OCT-2007  
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 DATASET # 0001  
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Maximum Chamber Gap = 6.7464

Minimum = 3.3732    Maximum = 3.4500    Range = 0.0768



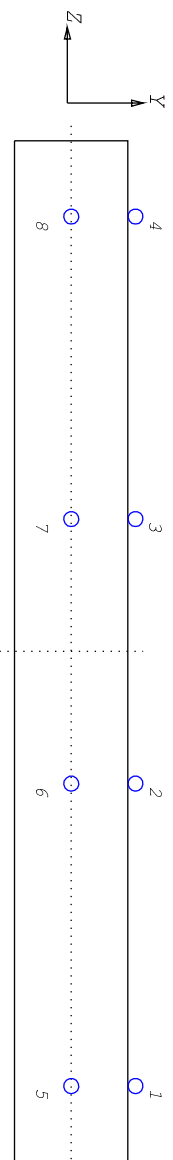
Pole Tip Number ----->

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  
TWIST TEST WITH FLAT FEET

DATE: 12-OCT-2007  
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DATASET # 0001  
PROGRAM VERSION 2.3



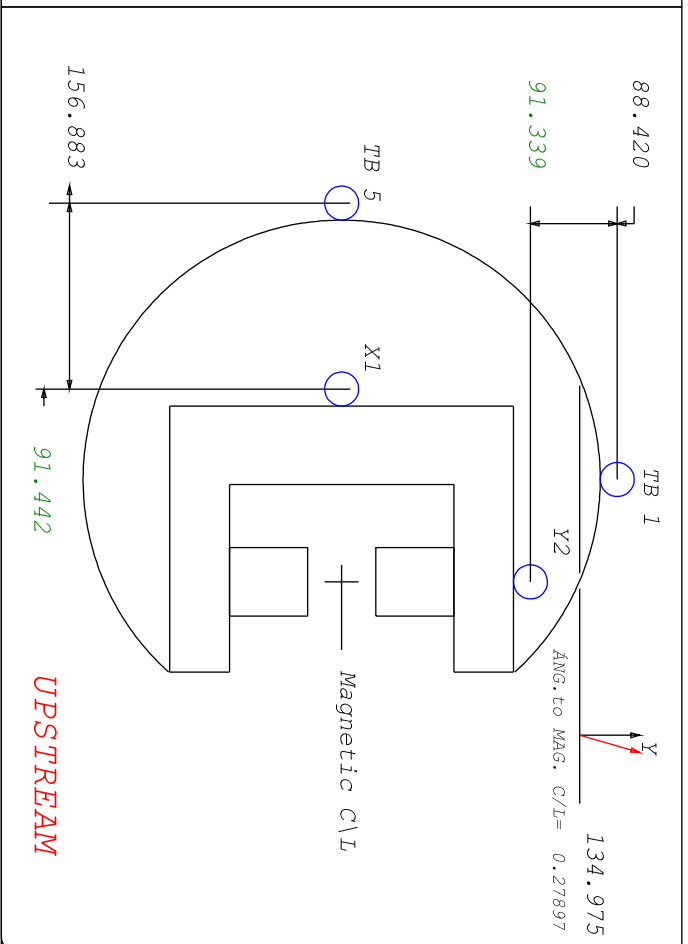
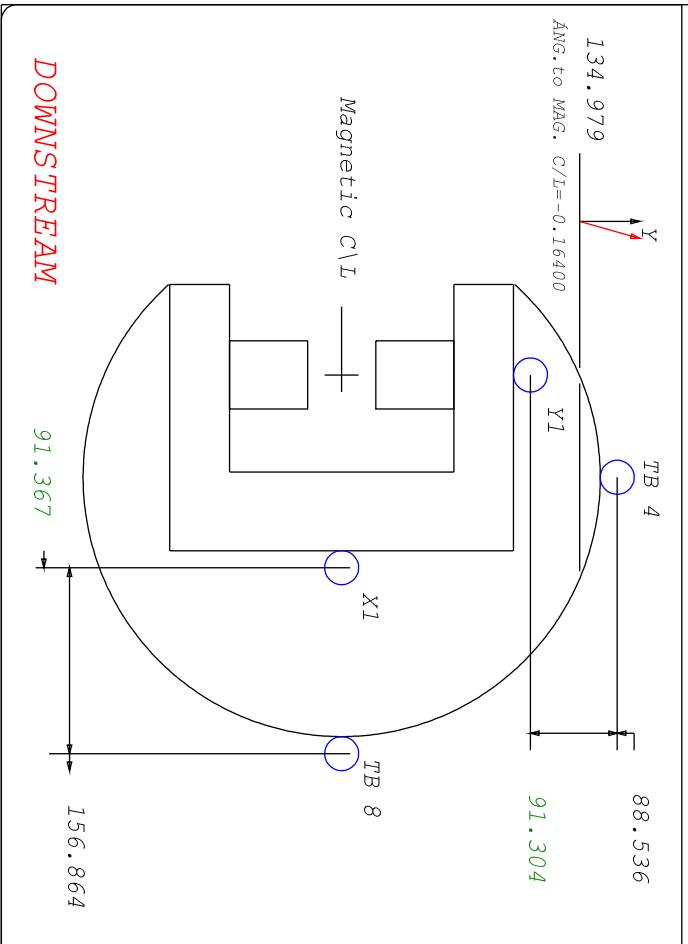
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	0.0258	179.7590	-1558.320
2	0.2191	179.8734	-584.6980
3	-0.1289	179.7419	591.3801
4	0.1026	179.8404	1562.2531
5	248.3252	0.0111	-1558.214
6	248.2497	0.0714	-584.6539
7	248.2658	-0.0272	591.4323
8	248.2313	-0.0550	1562.1307

	C/L Offset	Length
Top Magnetic Structure	0.022	3381.074
Bottom Magnetic Structure	-0.022	3380.950
Strongback	0.423	3399.936

Dimensions in mm

Angles in mrad



**SLAC**  
LCLS-MMF  
LEITZ CMM

Undulator Dimensional Fiducialization  
TWIST TEST WITH FLAT FEET

DATE: 12-OCT-2007  
UNDULATOR # 37  
DATASET # 0001  
PROGRAM VERSION 2.3