Included Angle Between Tips

Angle of Symmetry Axis to ZX Plane
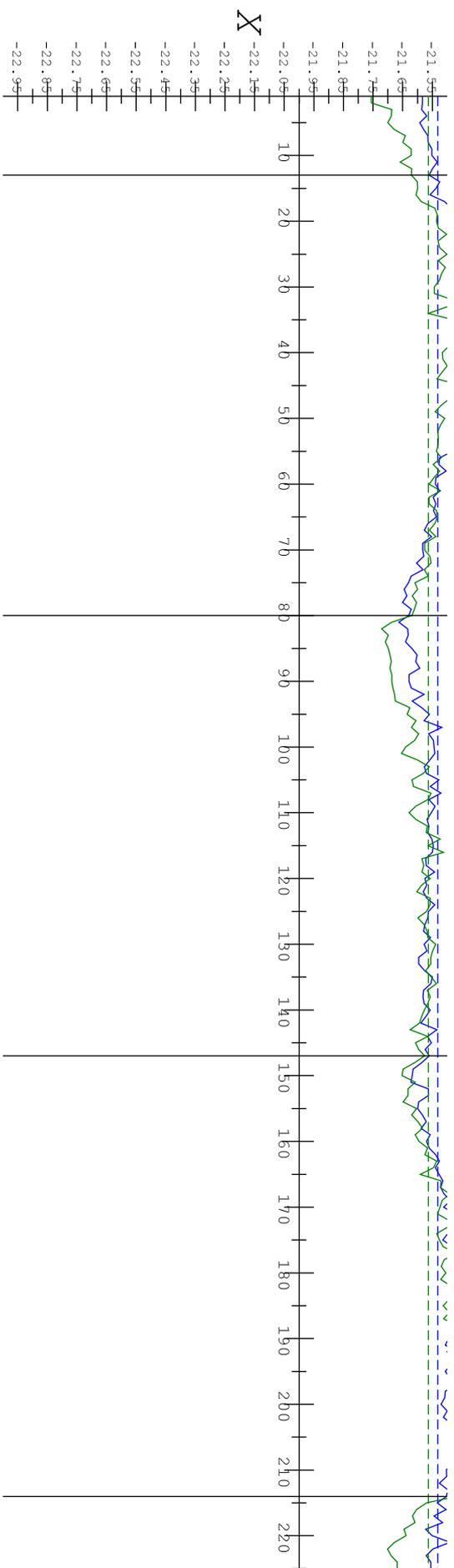
(mrad)

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
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LEITZ CMM

Undulator Pole Tip Angles
Post Magnetic Alignment

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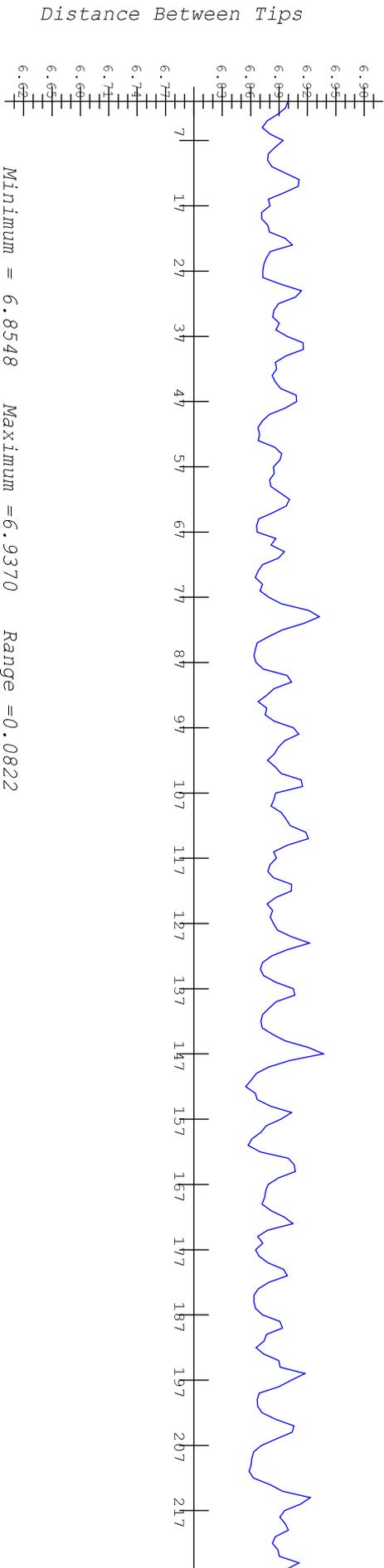
X

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 =   -21.564
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 =   -21.532
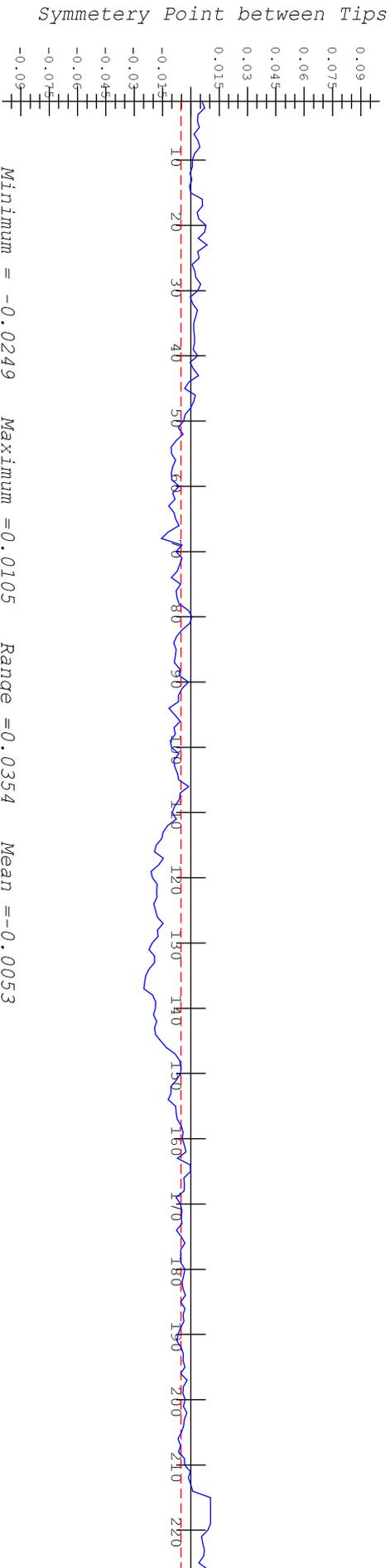
Distance Between Tips

Symmetery Point between Tips

in mm

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

Minimum = 6.8548   Maximum = 6.9370   Range = 0.0822

Minimum = -0.0249   Maximum = 0.0105   Range = 0.0354   Mean = -0.0053

Distance Between Tips is the distance 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

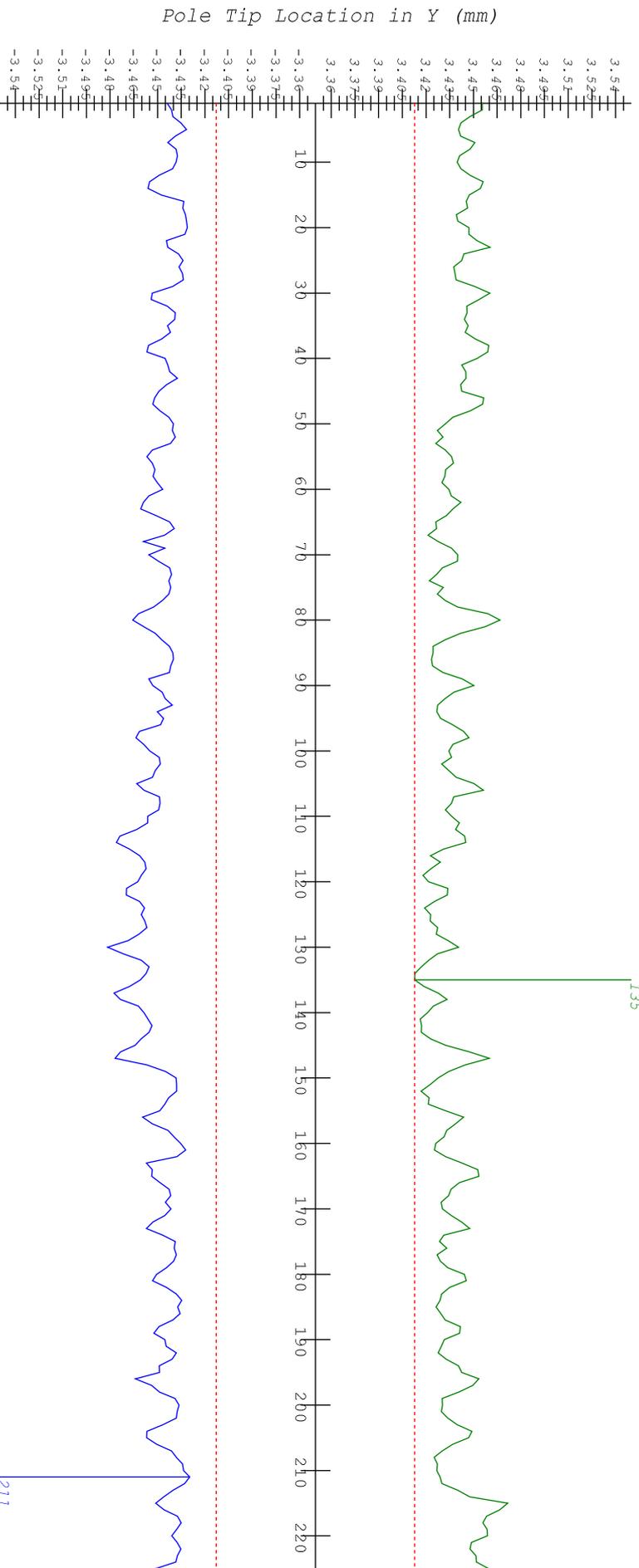Symmetry Point is the symmetry point between the Upper and Lower Pole Tips were they intersect a YZ plane at the Magnetic C\L

Undulator Pole Tip Location
Post Magnetic Alignment

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DATASET   # 0002
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Maximum Chamber Gap = 6.8257
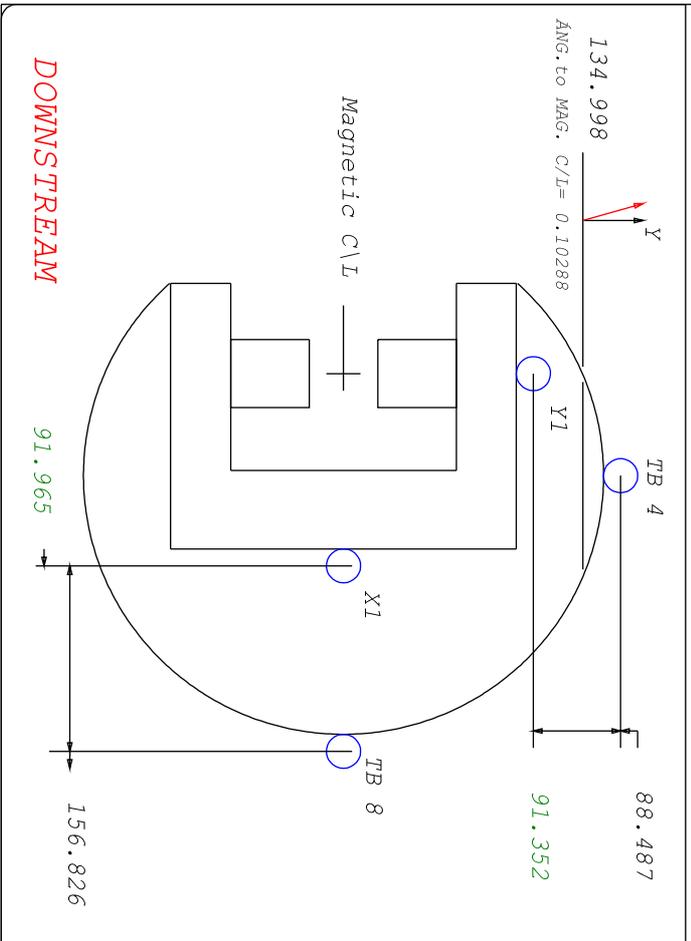
Minimum = 3.4128   Maximum = 3.4718   Range = 0.0590

135

Pole Tip Location in Y (mm)

Minimum = -3.4815   Maximum = -3.4296   Range = 0.0519

211

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

Undulator Pole Tip Location
Post Magnetic Alignment

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)

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LEITZ CMM

Undulator Dimensional Fiducialization
Post Magnetic Alignment

DOWNSTREAM

UPSTREAM

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DATASET # 0002
PROGRAM VERSION 2.7

Z

Y

Top Magnetic Structure
Bottom Magnetic Structure
Strongback

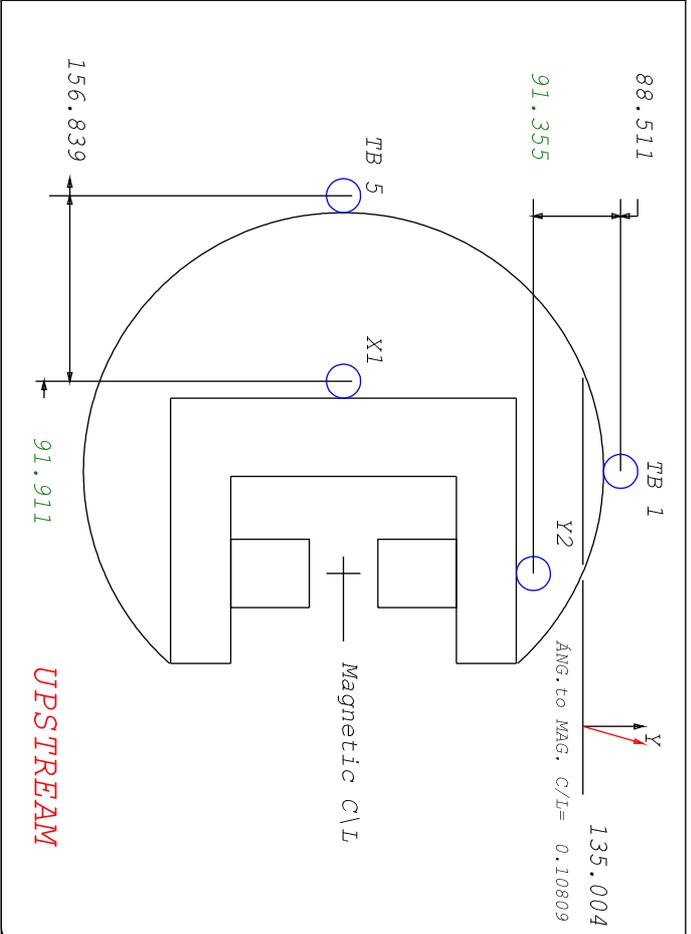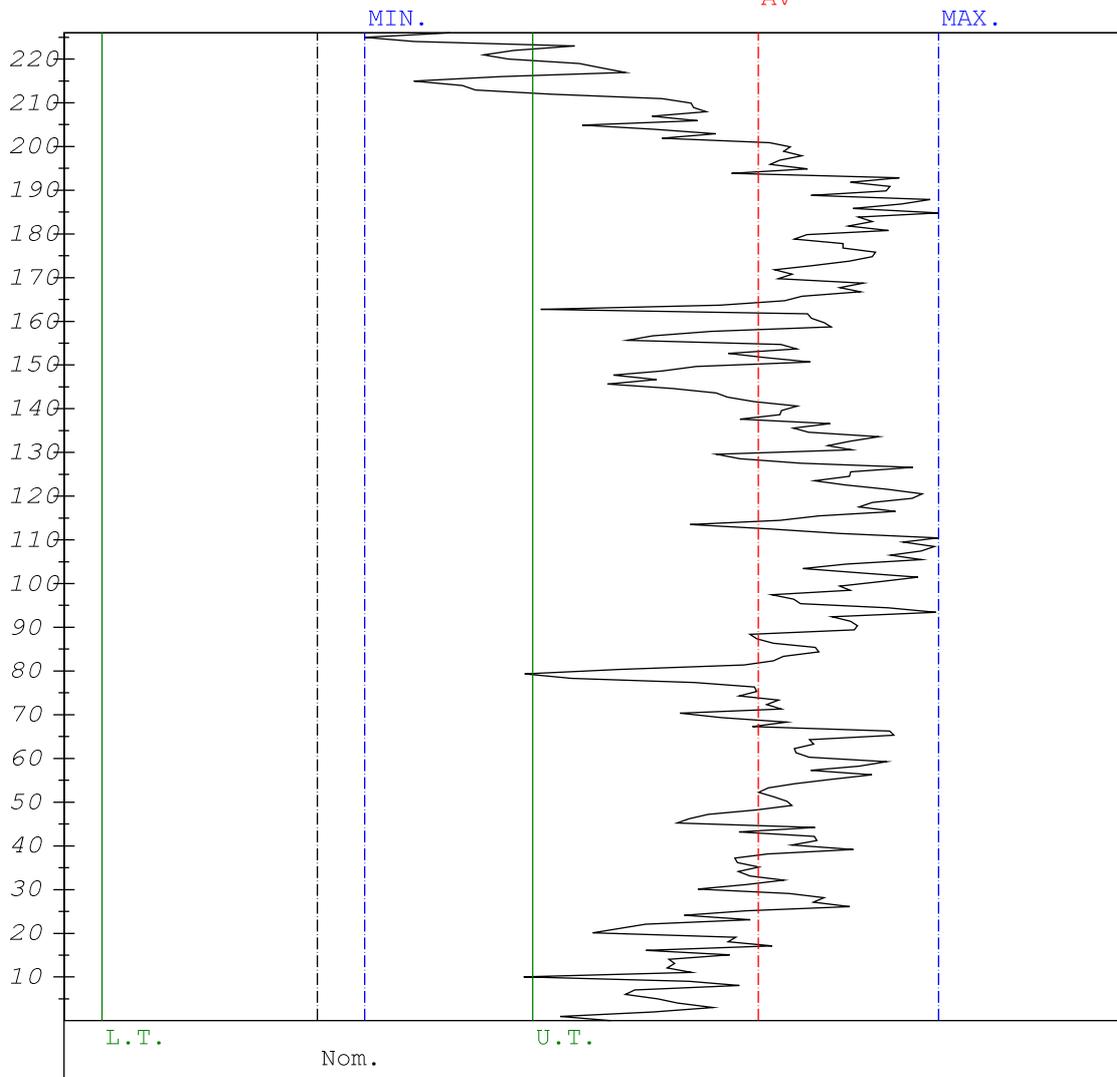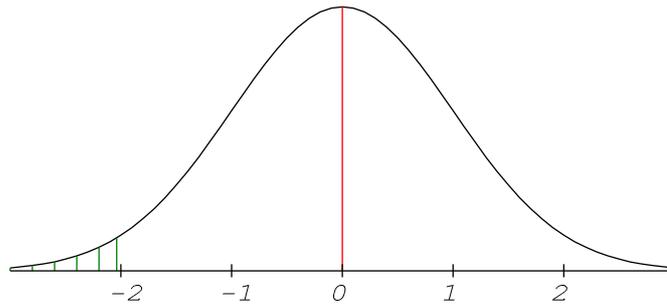|	C\L Offset	Length
Top Magnetic Structure	0.050	3380.962
Bottom Magnetic Structure	-0.050	3380.988
Strongback	0.502	3399.929

Dimensions in mm   Angles in mrad

TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	0.5640	179.8662	-1558.122
2	0.4531	179.8029	-584.4254
3	0.2813	179.7938	591.5599
4	0.3183	179.8391	1562.3030
5	0.7500	0.0510	-1558.086
6	0.6510	-0.0295	-584.4645
7	0.6529	-0.0554	591.6701
8	0.7908	-0.1267	1562.4072

134.998

ÁNG.to MAG. C\L= 0.10288

Magnetic C\L

Y1

TB 4

X1

TB 8

91.965

91.352

88.487

156.826

ÁNG.to MAG. C\L= 0.10809

135.004

TB 5

X1

TB 1

Y2

Magnetic C\L

156.839

91.911

91.355

88.511

Nominal : 4.5000	Averag :5.5242	Cent.-Dev. :1.0242
Up. Tol. :0.5	Maximum : 5.9426	U.Tol.Ex. > : 98.0 %
Low.Tol. :-0.5	Minimum : 4.6104	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.2570	In Tolerance: 2.0 %
Outlier : 0	Distribution : NOR	Dimension : mrad