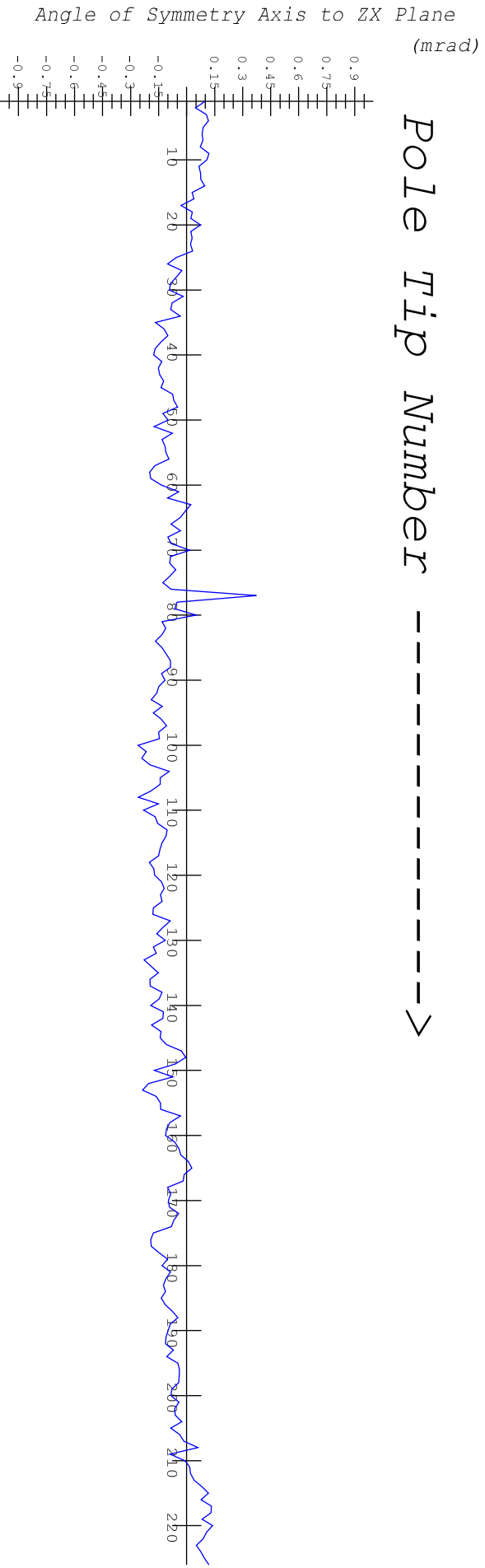


Pole Tip Number ----->



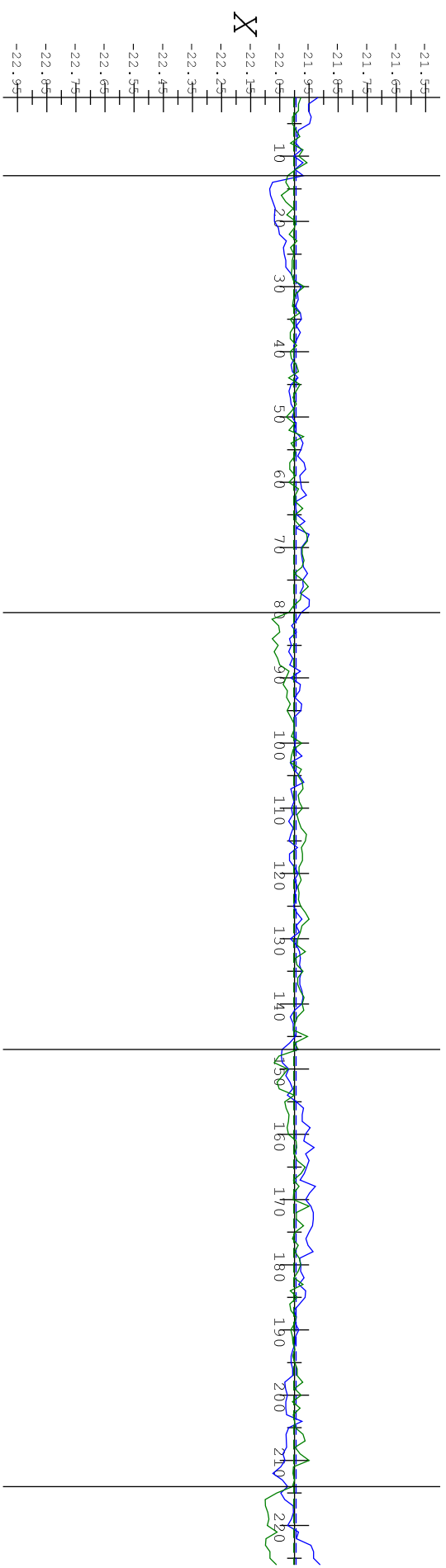
Symmetry Axis is the symmetry axis between the Upper and Lower Pole Tips  
 Included Angle is the angle between the Upper and Lower Pole Tips



Undulator Pole Tip Angles  
 Post Magnetic Alignment

DATE: 25-FEB-2009  
 UNDUULATOR # 37  
 DATASET # 0004  
 PROGRAM VERSION 2.9

# Pole Tip Number ----->

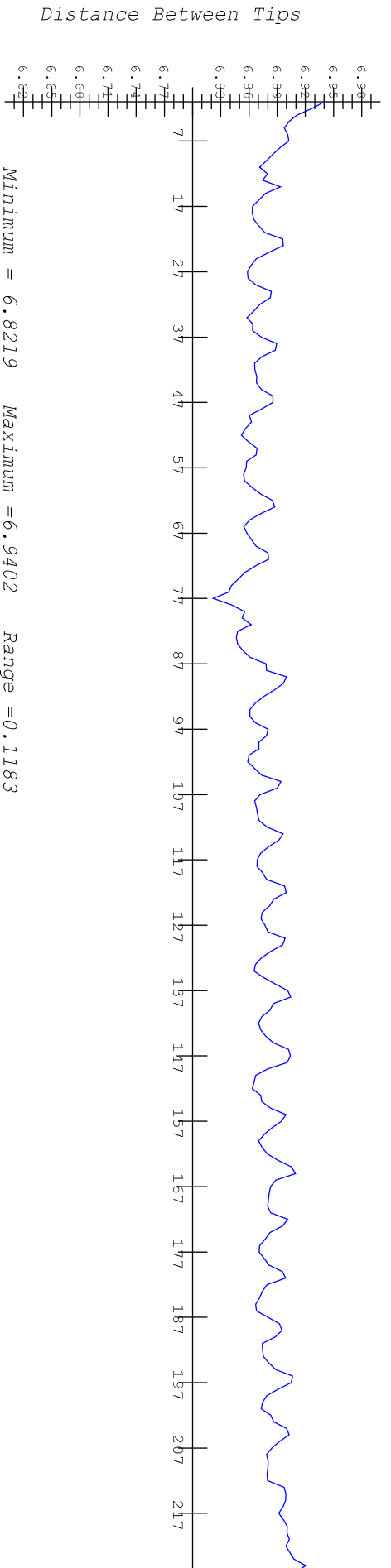


X values in mm  
 Green Solid = Point on front face of Upper Pole Tip 10mm above Magnetic C/L  
 Green Dash = Mean value of all Upper Pole Tips 10mm above Magnetic C/L Mean value Upper Pole Tips = -22.003  
 Blue Solid = Point on front face of Lower Pole Tip 10mm below Magnetic C/L  
 Blue Dash = Mean value of all Lower Pole Tips 10mm below Magnetic C/L Mean value Lower Pole Tips = -21.994

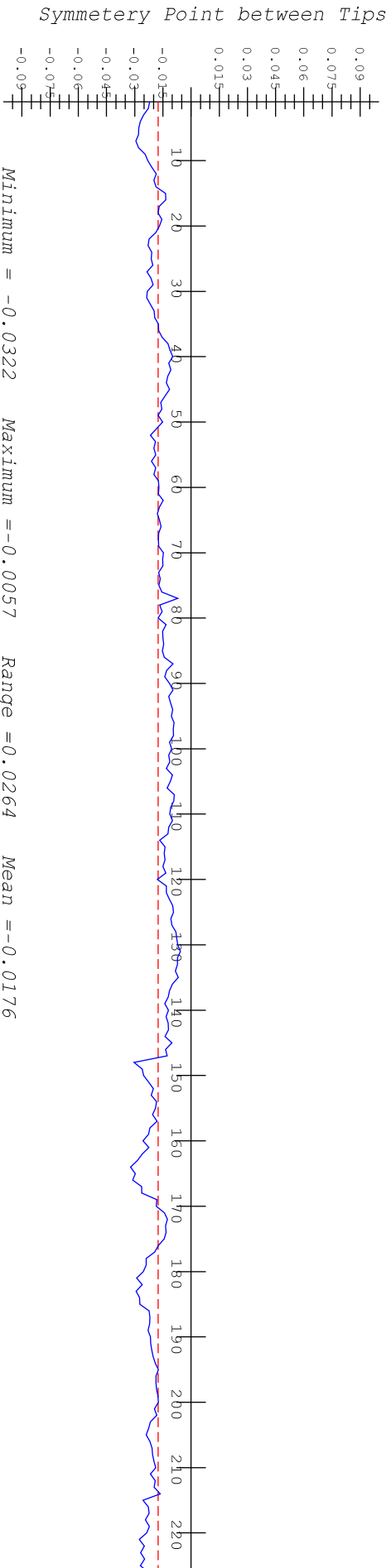


## Undulator Pole Tip Location Post Magnetic Alignment

DATE: 25-FEB-2009  
 UNDULATOR # 37  
 DATASET # 0004  
 PROGRAM VERSION 2.9



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

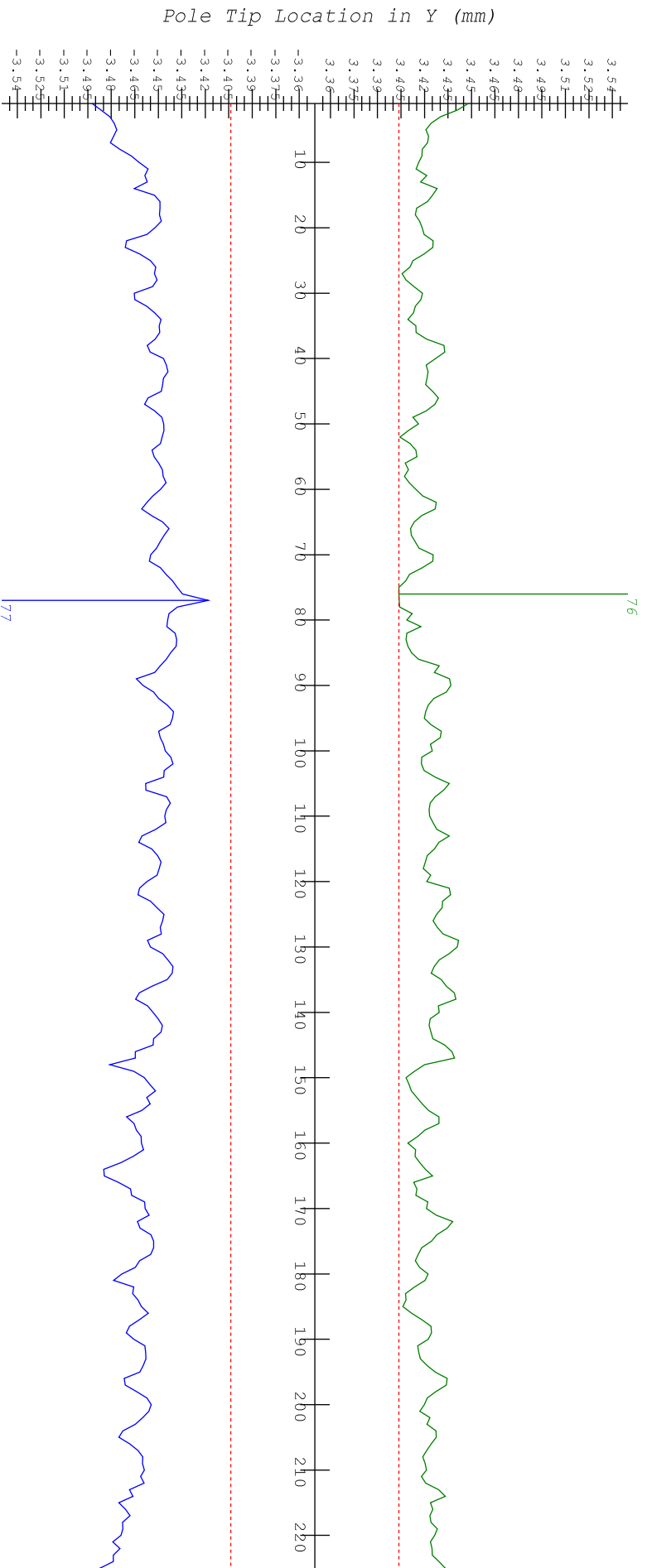


Undulator Pole Tip Location  
 Post Magnetic Alignment

DATE: 25-FEB-2009  
 UNDUULATOR # 37  
 DATASET # 0004  
 PROGRAM VERSION 2.9

Maximum Chamber Gap = 6.8073

Minimum = 3.4036    Maximum = 3.4480    Range = 0.0444



Minimum = -3.4922    Maximum = -3.4181    Range = 0.0741

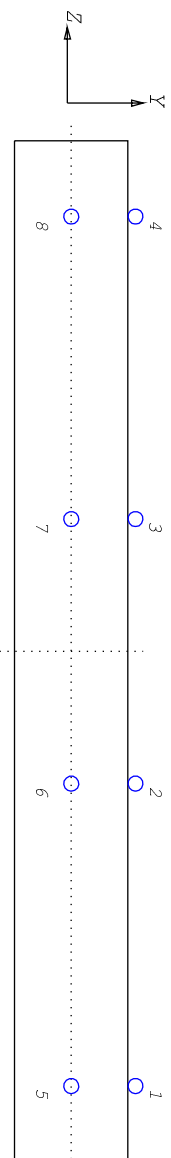
Pole Tip Number ----->

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)



### Undulator Pole Tip Location Post Magnetic Alignment

DATE: 25-FEB-2009  
UNDULATOR # 37  
DATASET # 0004  
PROGRAM VERSION 2.9



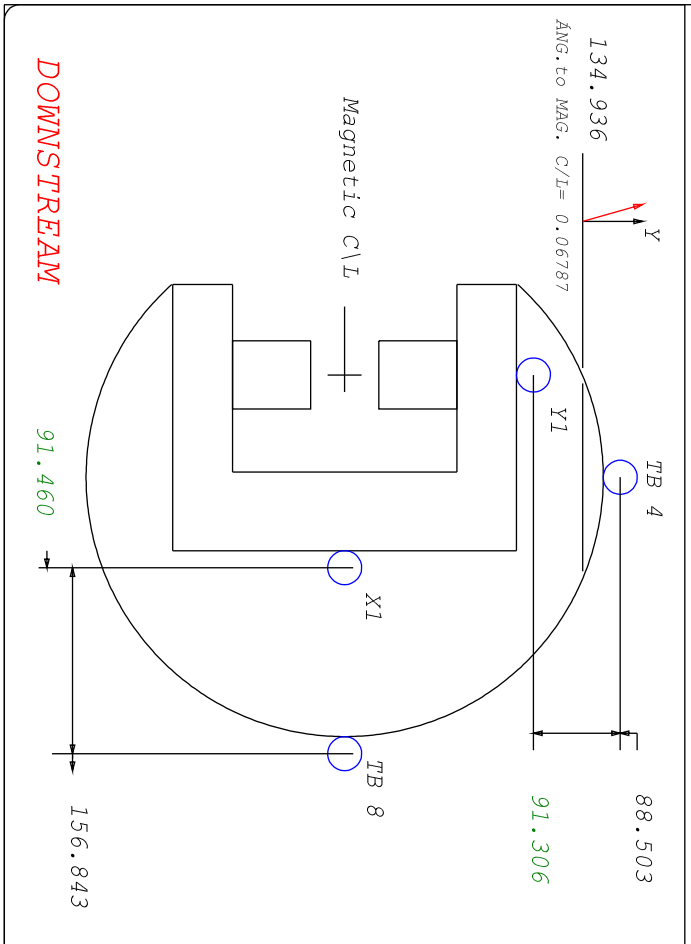
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	0.1024	179.7813	-1558.362
2	0.2858	179.8792	-584.7360
3	-0.0514	179.7297	591.3531
4	0.2143	179.8094	1562.2314
5	248.3673	-0.0107	1558.258
6	248.2854	0.0341	-584.6917
7	248.3011	-0.0909	591.3936
8	248.3029	-0.1457	1562.0979

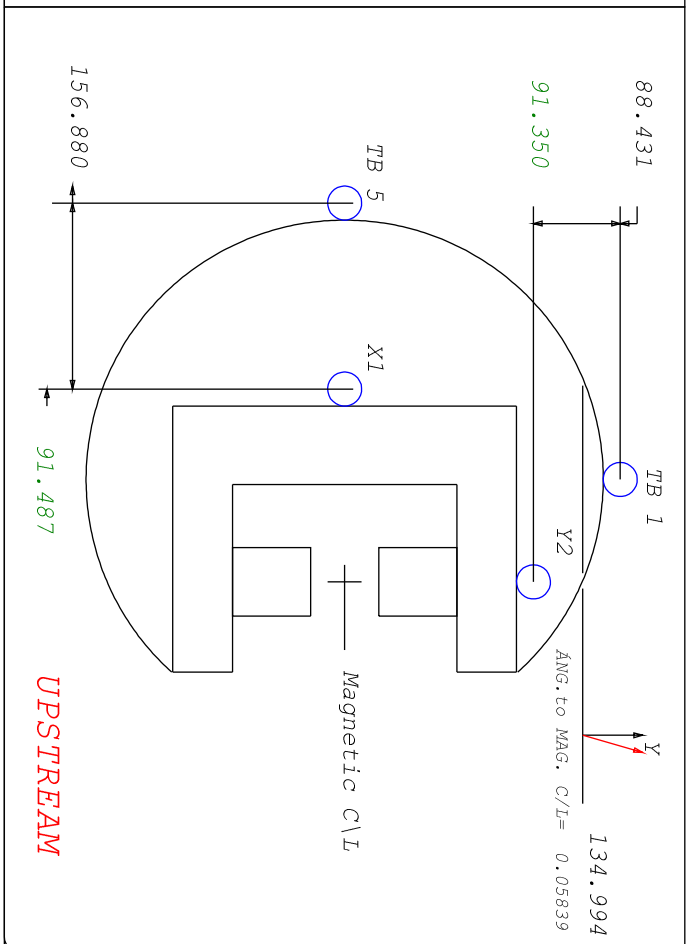
	C/L Offset	Length
Top Magnetic Structure	0.015	3381.088
Bottom Magnetic Structure	-0.015	3381.019
Strongback	0.388	3399.960

Dimensions in mm

Angles in mrad



DOWNSTREAM

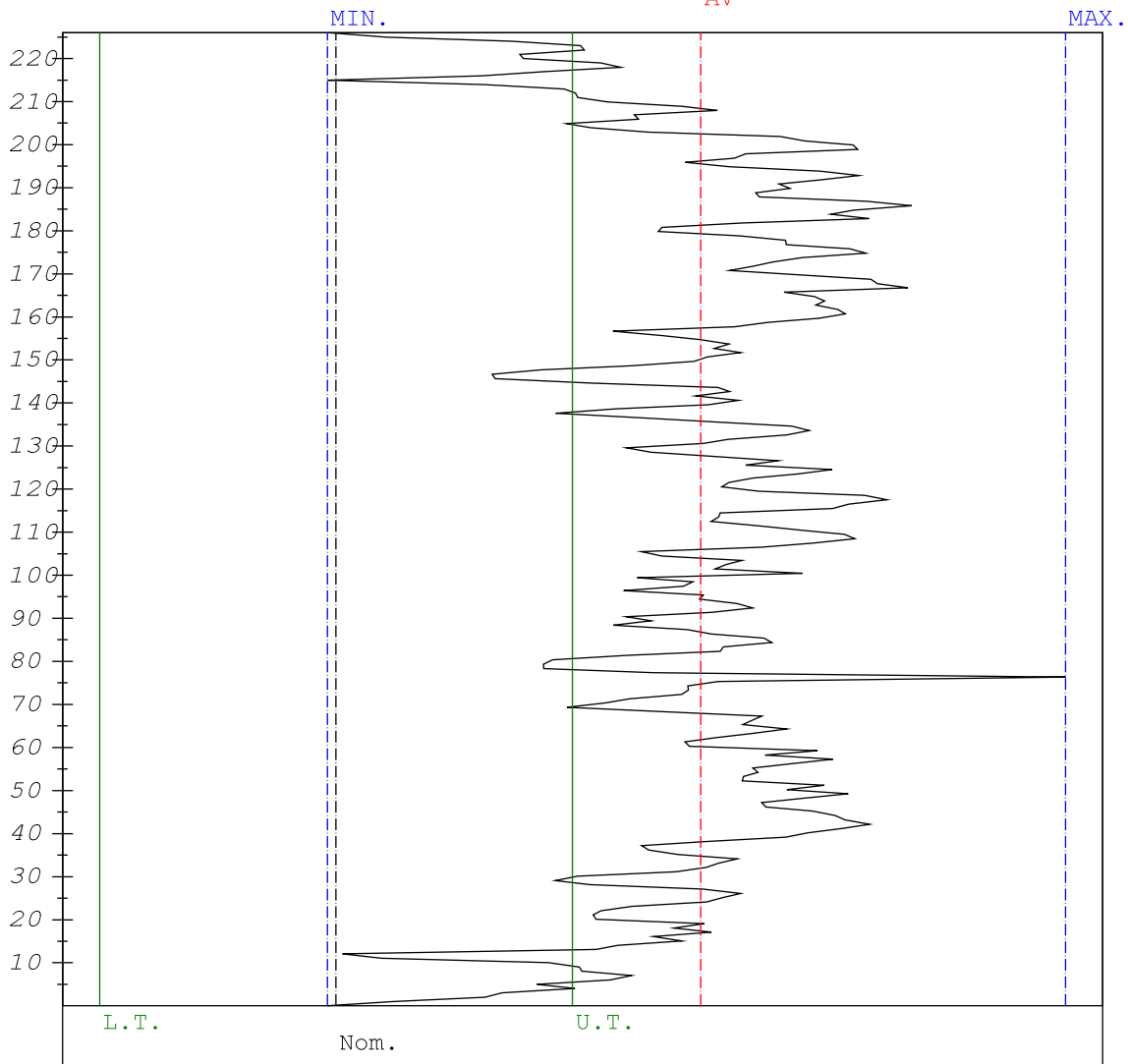
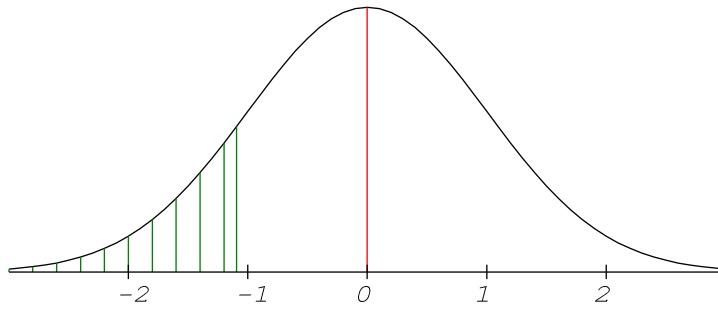


UPSTREAM



Undulator Dimensional Fiducialization  
Post Magnetic Alignment

DATE: 25-FEB-2009  
UNDULATOR # 37  
DATASET # 0004  
PROGRAM VERSION 2.9



Nominal : 4.5000	Averag : 5.2717	Cent.-Dev. : 0.7717
Up. Tol. : 0.5	Maximum : 6.0428	U.Tol.Ex. > : 86.3 %
Low.Tol. : -0.5	Minimum : 4.4817	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.2483	In Tolerance: 13.7 %
Outlier : 0	Distribution : NOR	Dimension : mrad



Statistical Evaluation  
Pole Tip Gap Angle  
Post Magnetic Alignment

DATE: 25-FEB-2009  
UNDULATOR # 37  
DATASET # 0004  
PROGRAM VERSION 2.9