

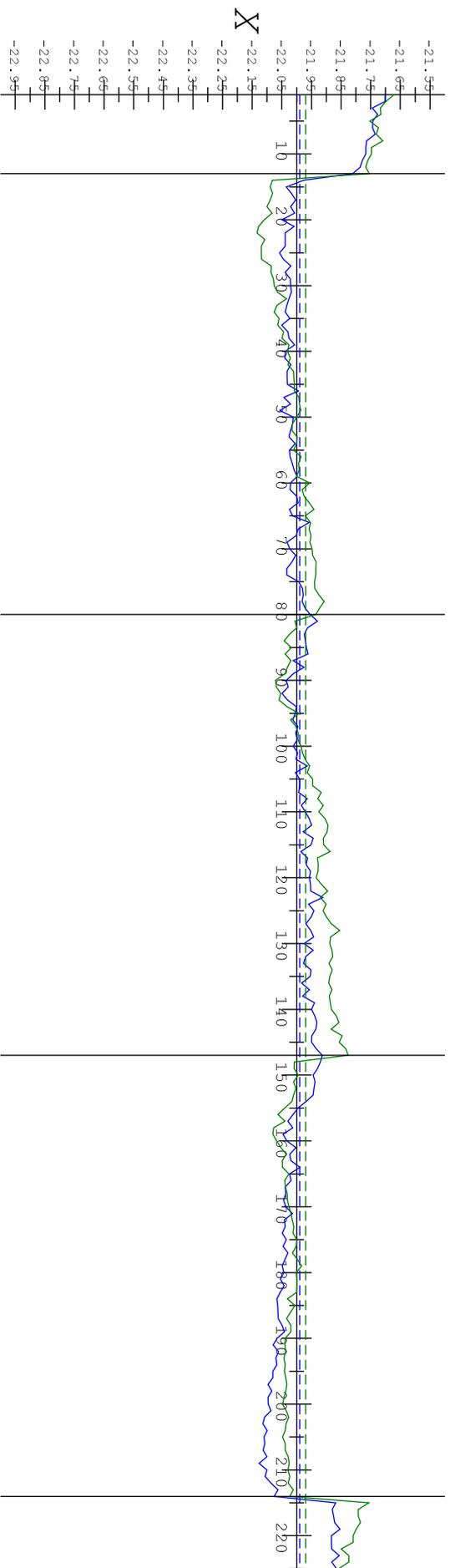
Symmetry Axis is the symmetry axis between the Upper and Lower Pole Tips
 Included Angle is the angle between the Upper and Lower Pole Tips

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 LCLS-MMF
 LEITZ CMM

Undulator Pole Tip Angles
 Post Magnetic Alignment

DATE: 18-JUL-2007
 UNDULATOR # 14
 DATASET # 0001
 PROGRAM VERSION 2.0

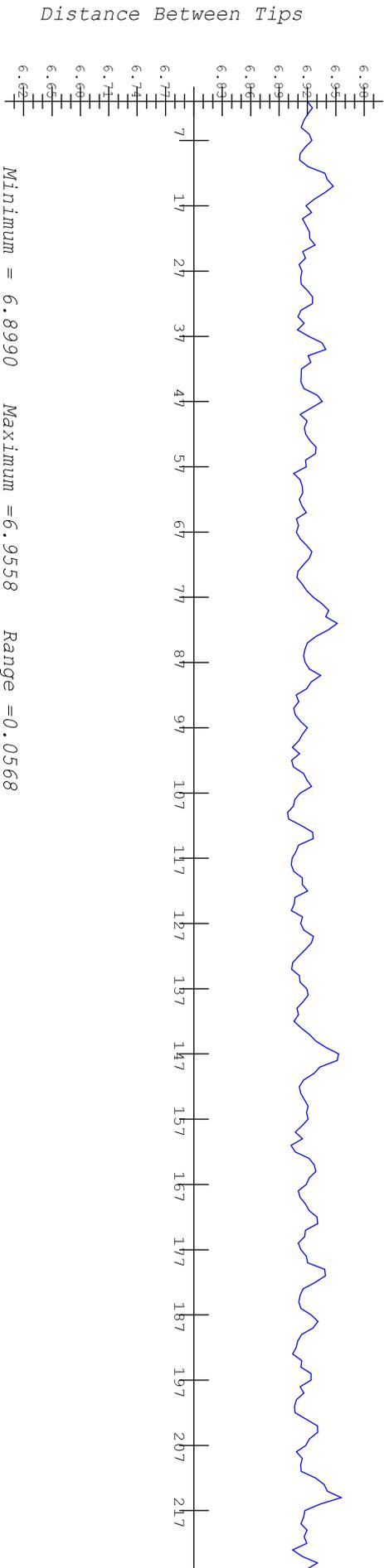
Pole Tip Number ----->



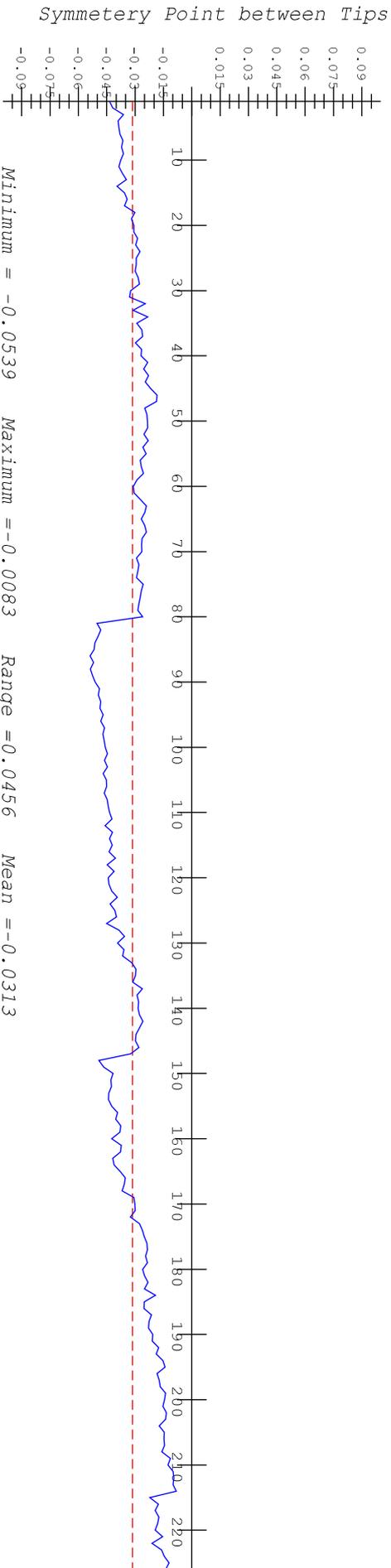
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Undulator Pole Tip Location
 Post Magnetic Alignment

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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

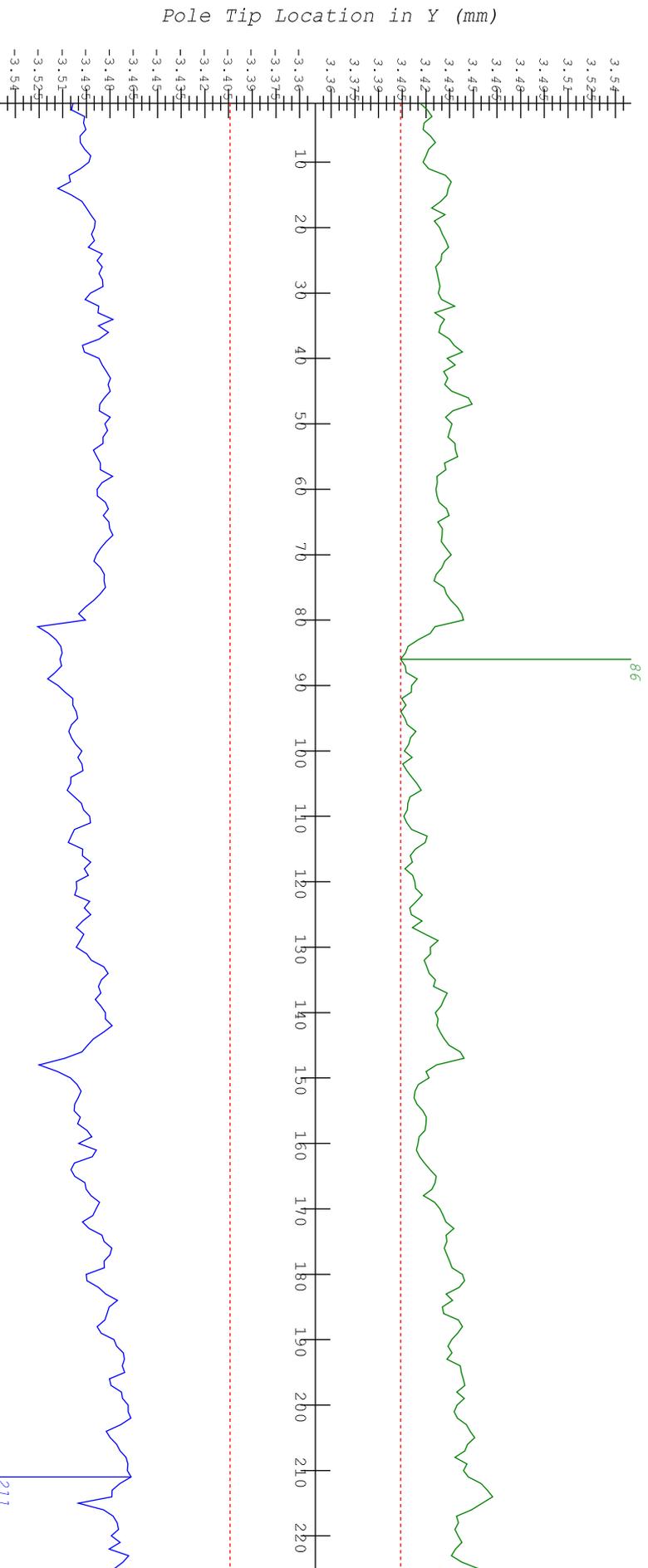
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Undulator Pole Tip Location
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Maximum Chamber Gap = 6.8081

Minimum = 3.4041 Maximum = 3.4623 Range = 0.0583



Minimum = -3.5258 Maximum = -3.4667 Range = 0.0591

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)

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Undulator Pole Tip Location
Post Magnetic Alignment

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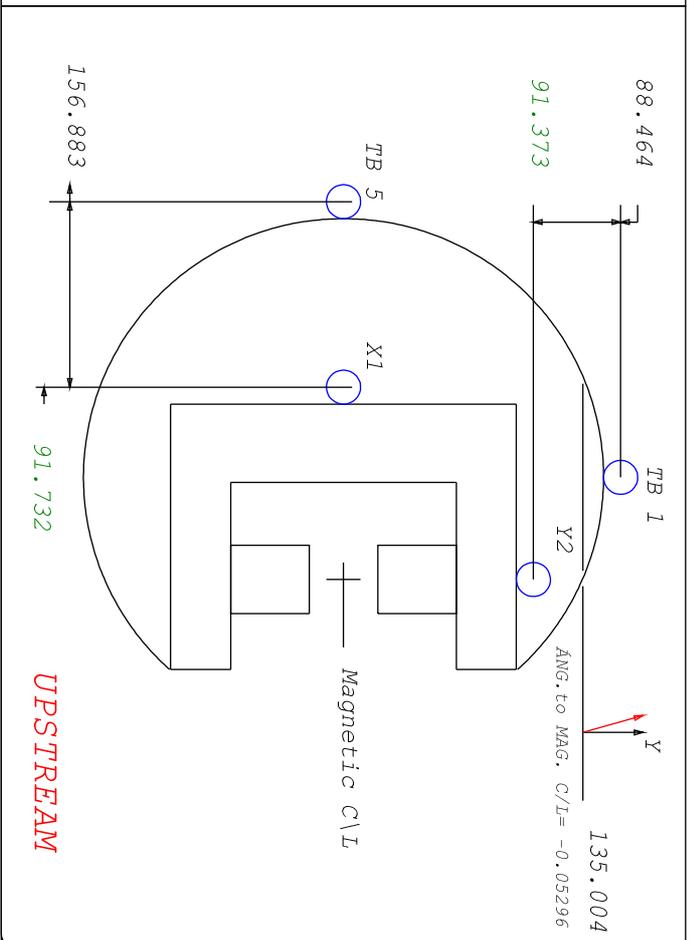
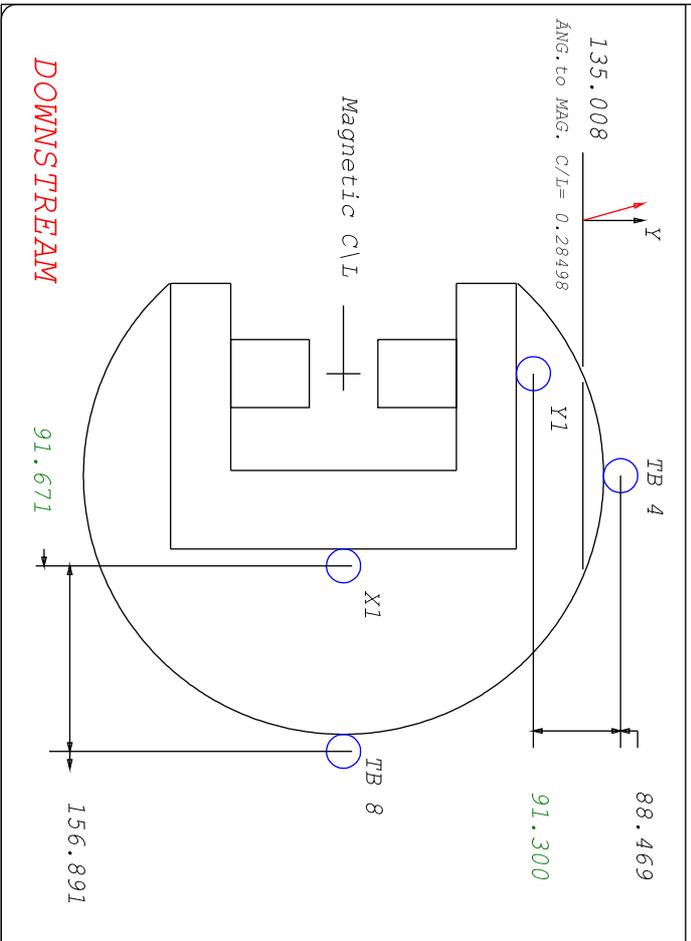
TOOLING BALL LOCATIONS

NUM.	X	Y	Z
1	0.3325	179.8369	-1558.218
2	0.3778	179.6919	-584.6346
3	0.4738	179.7079	591.3822
4	0.3402	179.7691	1562.3531
5	248.6145	-0.0691	1558.283
6	248.6585	0.0265	-584.5811
7	248.7394	0.0534	591.4871
8	248.5622	0.0096	1562.3345

Top Magnetic Structure C/L Offset Length 3381.028
 Bottom Magnetic Structure -0.027 3380.959
 Strongback 0.419 3399.960

Dimensions in mm

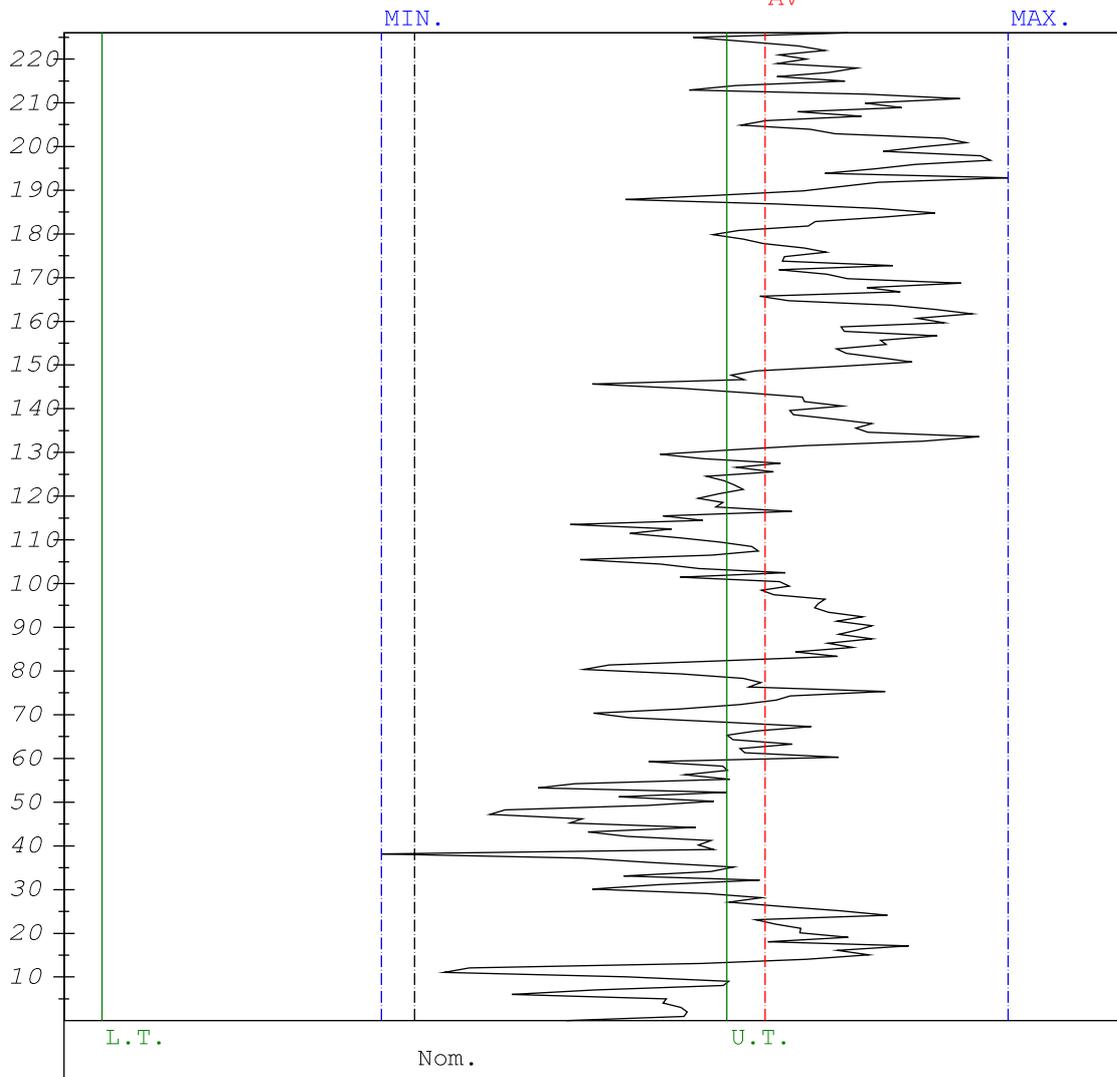
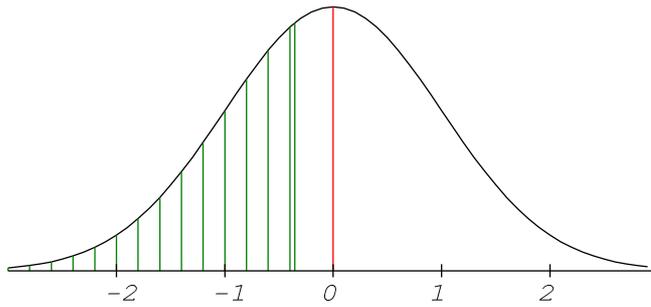
Angles in mrad



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Undulator Fiducialization
Post Magnetic Alignment

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Nominal : 4.5000	Averag : 5.0613	Cent.-Dev. : 0.5613
Up. Tol. : 0.5	Maximum : 5.4497	U.Tol.Ex. > : 63.8 %
Low.Tol. : -0.5	Minimum : 4.4472	L.Tol.Ex. < : 0.0 %
Spl.Size : 226	Stand.-Dev.: 0.1734	In Tolerance: 36.2 %
Outlier : 0	Distribution : NOR	Dimension : mrad

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Statistical Evaluation
Pole Tip Gap Angle
Post Magnetic Alignment

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UNDULATOR # 14
DATASET # 0001
PROGRAM VERSION 2.0