

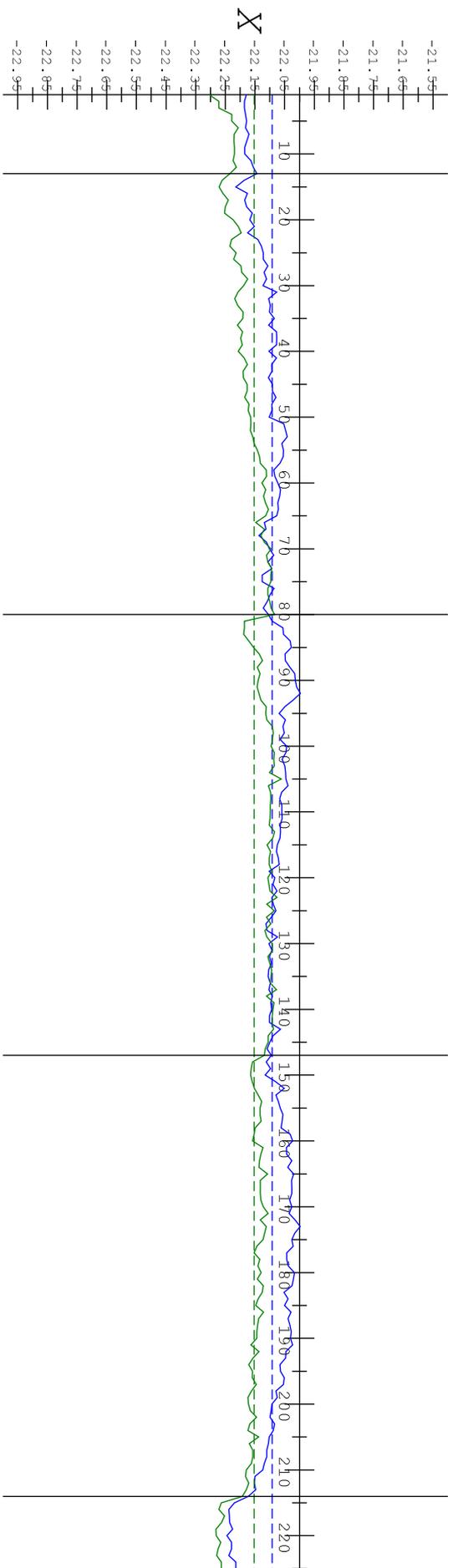
*Symmetry Axis is the symmetry axis between the Upper and Lower Pole Tips
Included Angle is the angle between the Upper and Lower Pole Tips*

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*Undulator Pole Tip Angles
Post Magnetic Alignment*

DATE: 01-DEC-2008
UNDULATOR # 32
DATASET # 0002
PROGRAM VERSION 2.7

Pole Tip Number ----->

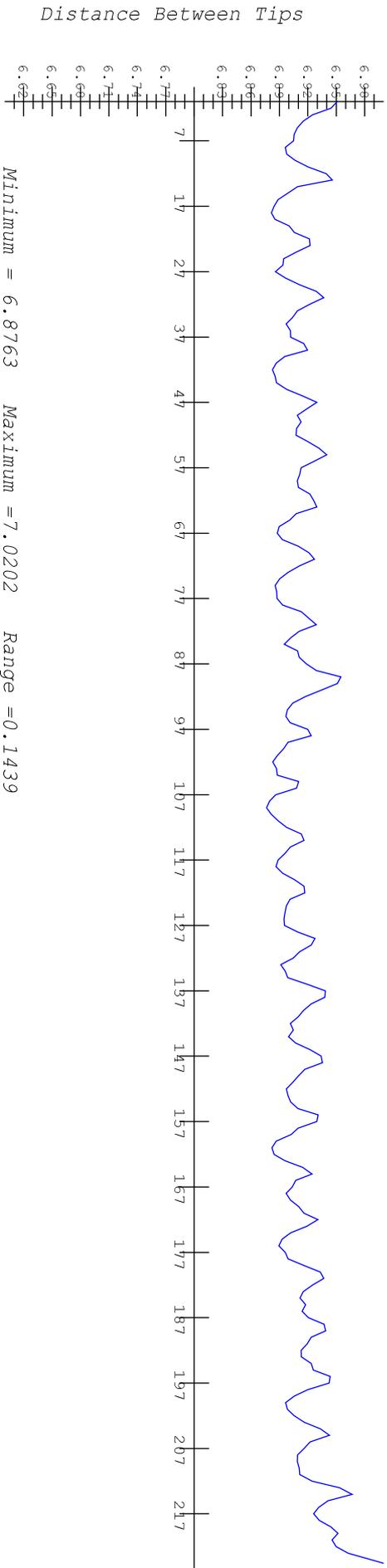


X values in mm
 Green Solid = Point on front face of Upper Pole Tip 10mm above Magnetic C/L
 Green Dash = Mean value of all Upper Pole Tips 10mm above Magnetic C/L Mean value Upper Pole Tips = -22.153
 Blue Solid = Point on front face of Lower Pole Tip 10mm below Magnetic C/L
 Blue Dash = Mean value of all Lower Pole Tips 10mm below Magnetic C/L Mean value Lower Pole Tips = -22.092

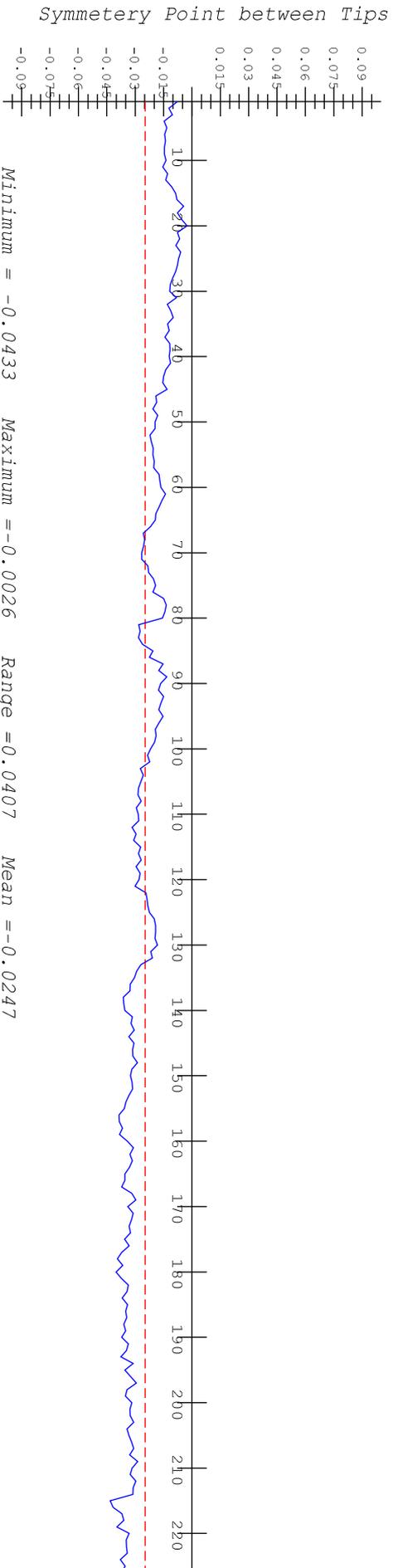
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Undulator Pole Tip Location Post Magnetic Alignment

DATE: 01-DEC-2008
 UNDULATOR # 32
 DATASET # 0002
 PROGRAM VERSION 2.7



Pole Tip Number ----->



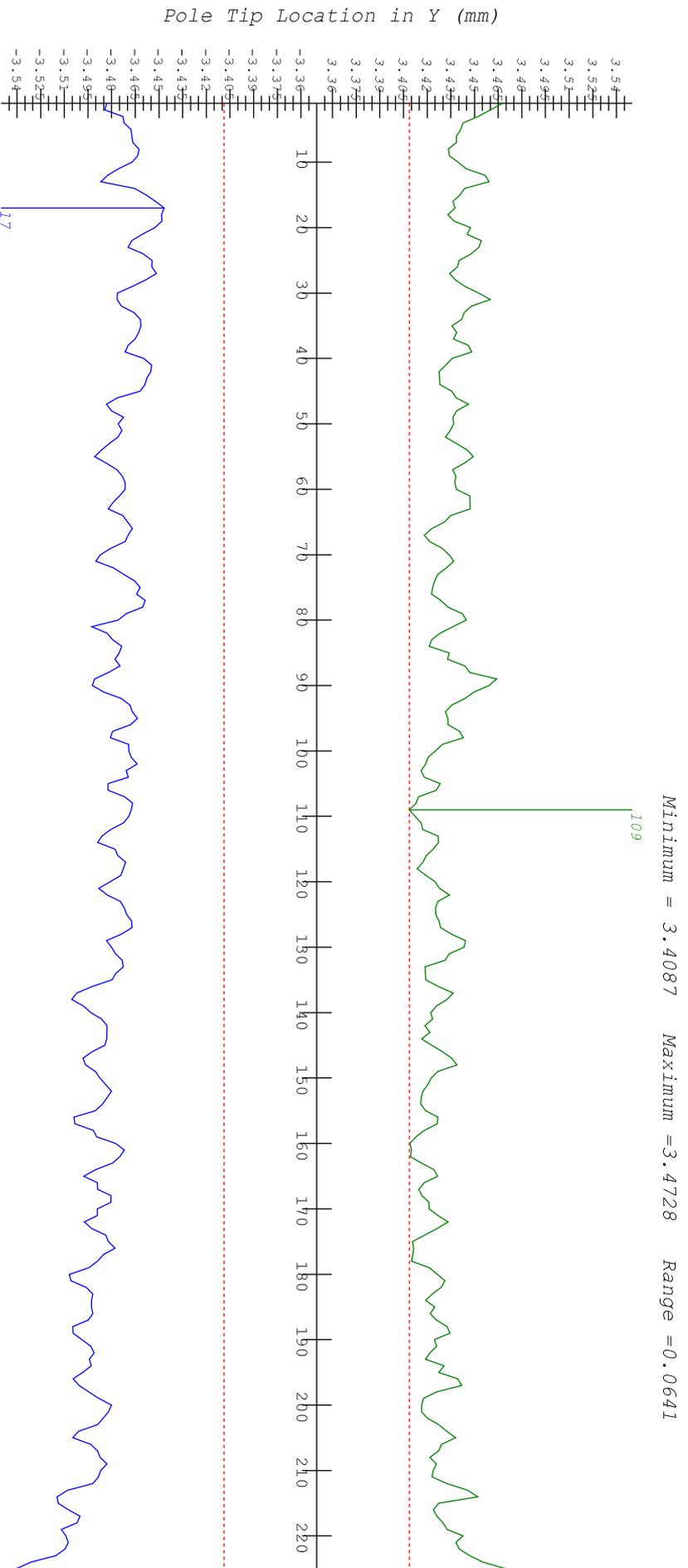
Symmetry Point is the symmetry point between the Upper and Lower Pole Tips were they intersect a YZ plane at the Magnetic C/L
 Broken Red line is Mean Value of Symmetry Points
 Distance Between Tips is the distance between the Upper and Lower Pole Tips were they intersect a YZ plane at the Magnetic C/L

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Undulator Pole Tip Location
 Post Magnetic Alignment

DATE: 01-DEC-2008
 UNDUULATOR # 32
 DATASET # 0002
 PROGRAM VERSION 2.7

Maximum Chamber Gap = 6.8174



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

DATE: 01-DEC-2008
UNDULATOR # 32
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PROGRAM VERSION 2.7



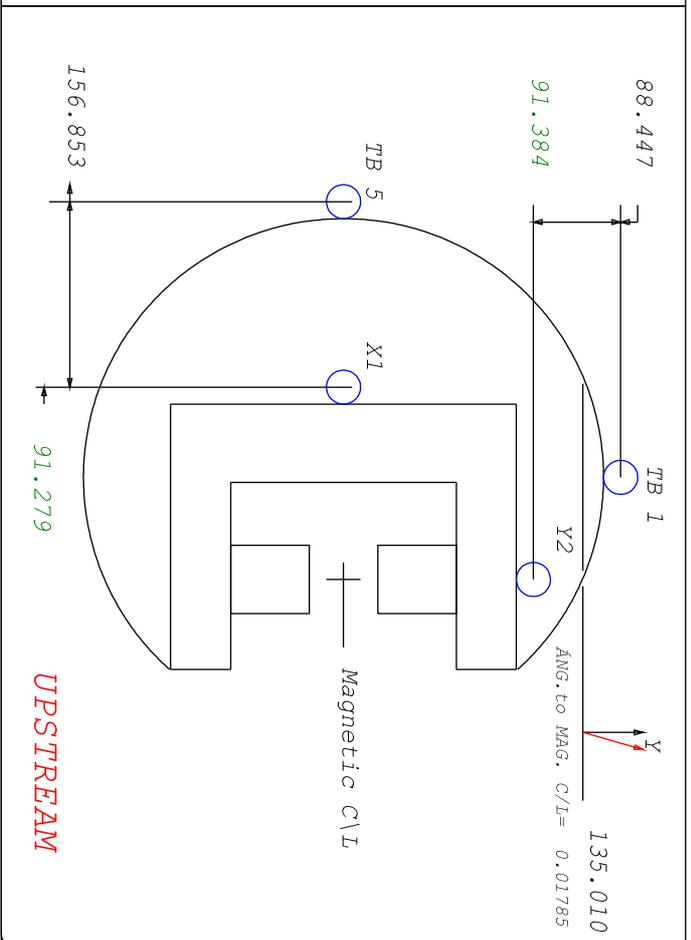
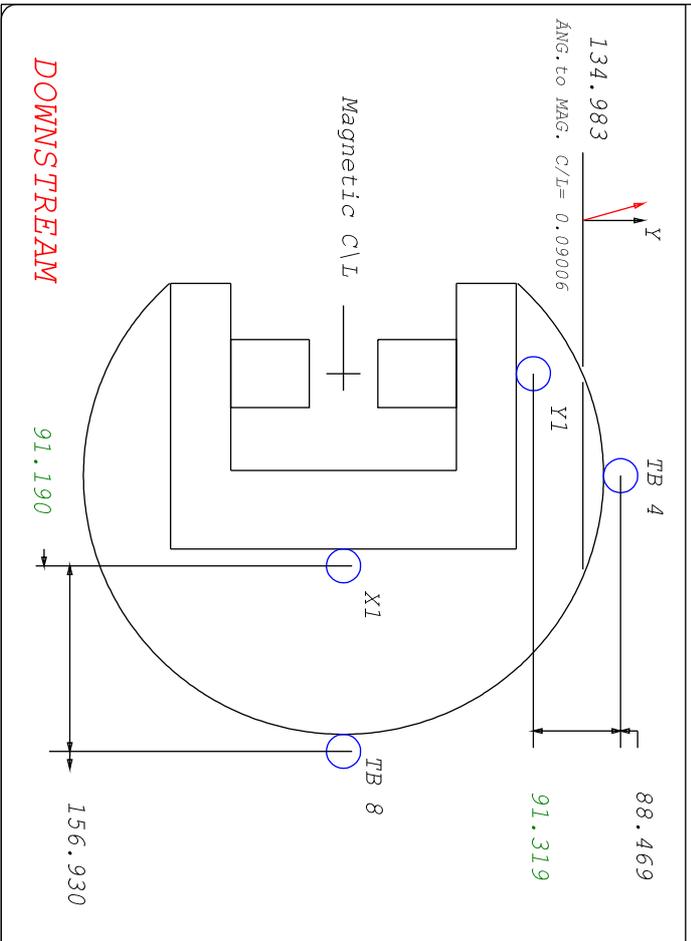
TOOLING BALL LOCATIONS

| NUM. | X | Y | Z |
|------|----------|----------|-----------|
| 1 | -0.1472 | 179.8312 | -1558.109 |
| 2 | -0.1460 | 179.7117 | -584.5932 |
| 3 | -0.0316 | 179.6806 | 591.4996 |
| 4 | -0.0702 | 179.7880 | 1562.3072 |
| 5 | 248.1319 | 0.0757 | -1558.096 |
| 6 | 248.2244 | 0.0009 | -584.4800 |
| 7 | 248.2015 | -0.0383 | 591.5540 |
| 8 | 248.1199 | 0.0004 | 1562.4020 |

| | C/L Offset | Length |
|---------------------------|------------|----------|
| Top Magnetic Structure | -0.066 | 3380.934 |
| Bottom Magnetic Structure | 0.066 | 3381.190 |
| Strongback | 0.477 | 3399.955 |

Dimensions in mm

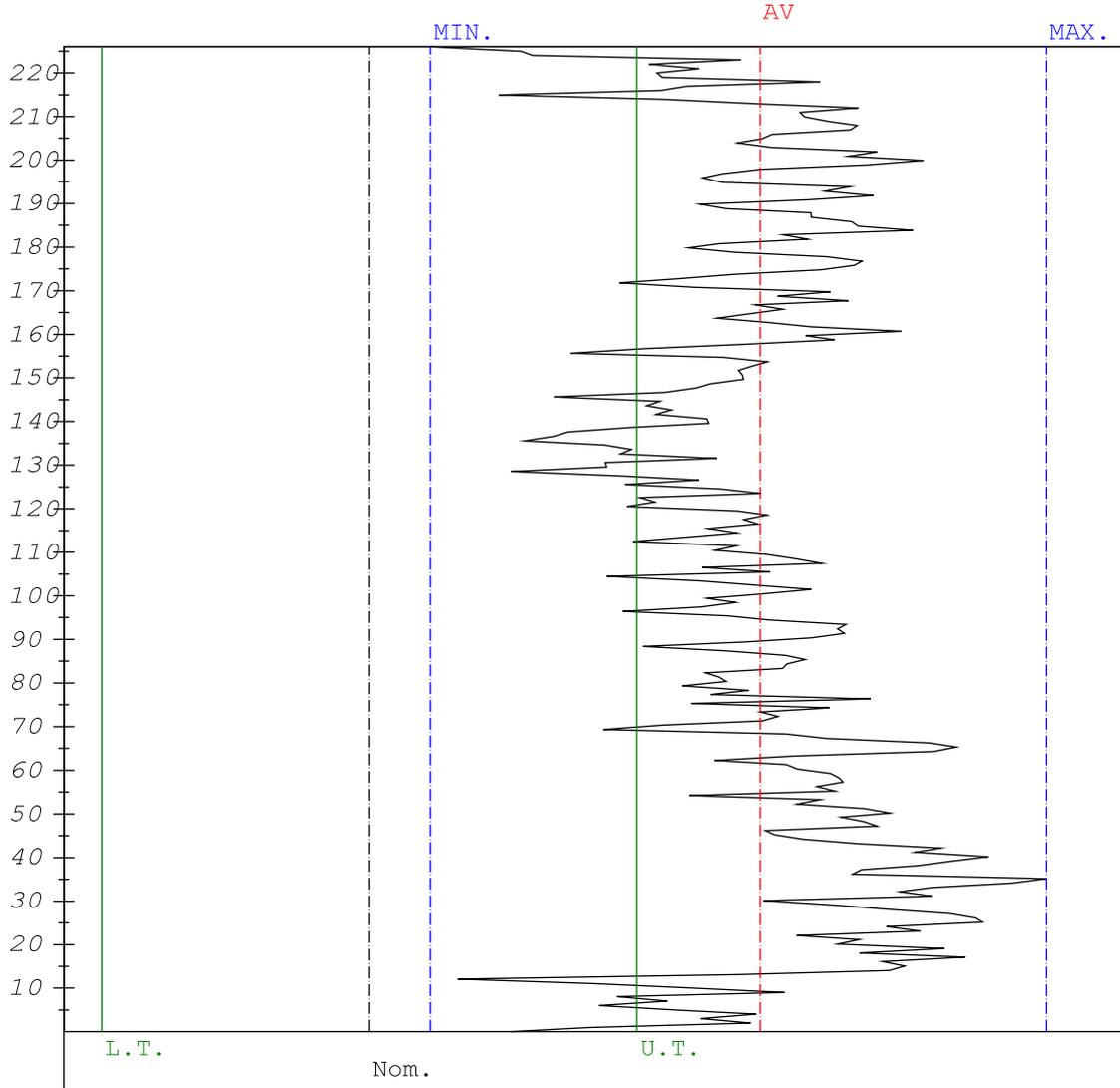
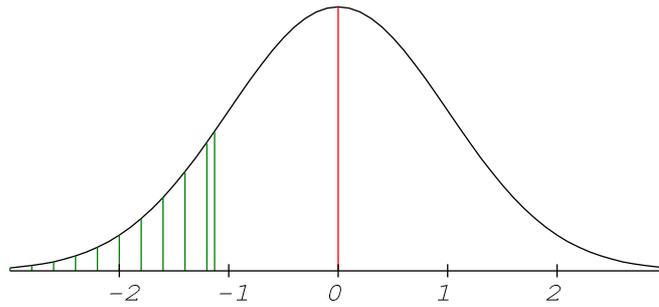
Angles in mrad



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Undulator Fiducialization
Post Magnetic Alignment

DATE: 01-DEC-2008
UNDULATOR # 32
DATASET # 0002
PROGRAM VERSION 2.7



| | | |
|------------------|---------------------|----------------------|
| Nominal : 4.5000 | Averag : 5.2302 | Cent.-Dev. : 0.7302 |
| Up. Tol. : 0.5 | Maximum : 5.7650 | U.Tol.Ex. > : 87.1 % |
| Low.Tol. : -0.5 | Minimum : 4.6139 | L.Tol.Ex. < : 0.0 % |
| Spl.Size : 226 | Stand.-Dev.: 0.2038 | In Tolerance: 12.9 % |
| Outlier : 0 | Distribution : NOR | Dimension : mrad |

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Statistical Evaluation
Pole Tip Gap Angle
Post Magnetic Alignment

DATE: 01-DEC-2008
UNDULATOR # 32
DATASET # 0002
PROGRAM VERSION 2.7