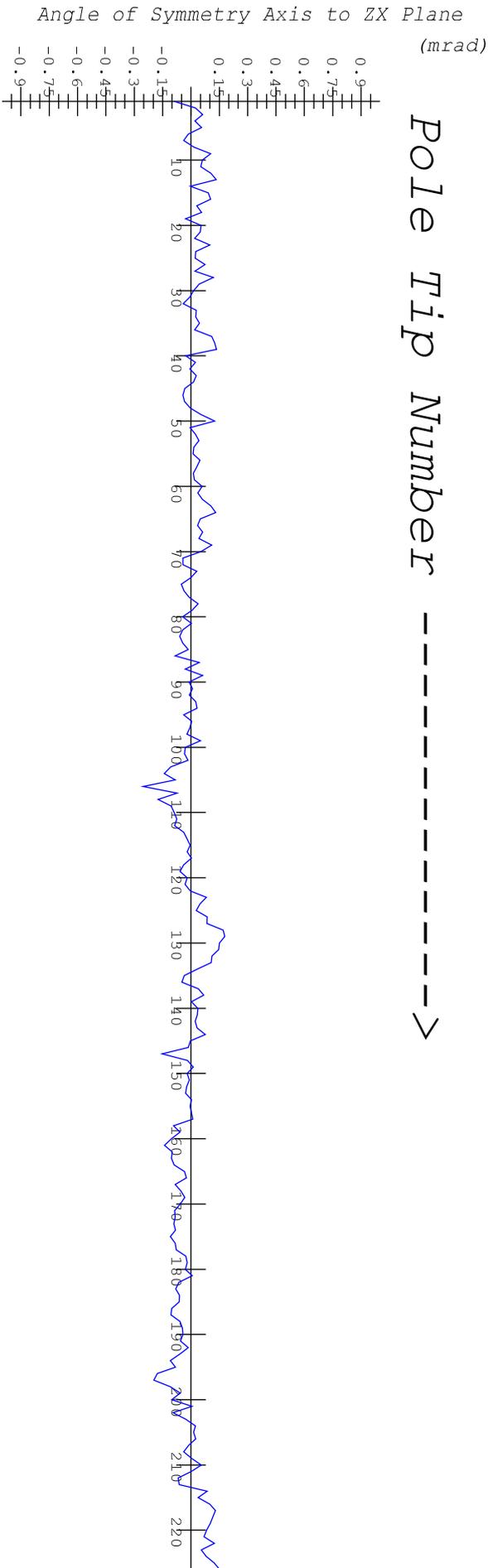


Pole Tip Number ----->

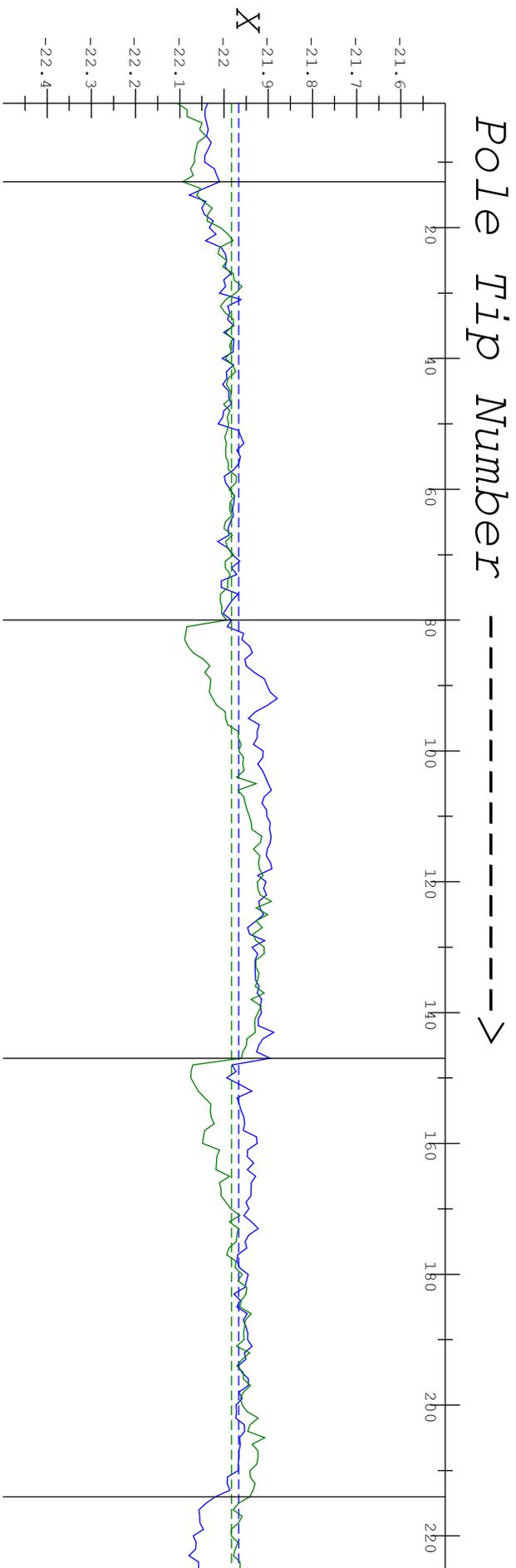


Symmetry Axis is the symmetry axis between the Upper and Lower Pole Tips  
 Included Angle is the angle between the Upper and Lower Pole Tips



Undulator Pole Tip Angles  
 Inprocess Shim Check  
 6.8mm Gap Undulator

DATE: 11-APR-2012  
 UNDULATOR # 32  
 DATASET # 0005  
 PROGRAM VERSION 3.0



X values in mm

Green Solid = Point on front face of Upper Pole Tip 11.5mm above Magnetic C/L

Green Dash = Mean value of all Upper Pole Tips 11.5mm above Magnetic C/L Mean value Upper Pole Tips = -21.983

Blue Solid = Point on front face of Lower Pole Tip 11.5mm below Magnetic C/L

Blue Dash = Mean value of all Lower Pole Tips 11.5mm below Magnetic C/L Mean value Lower Pole Tips = -21.967



## Undulator Pole Tip Location

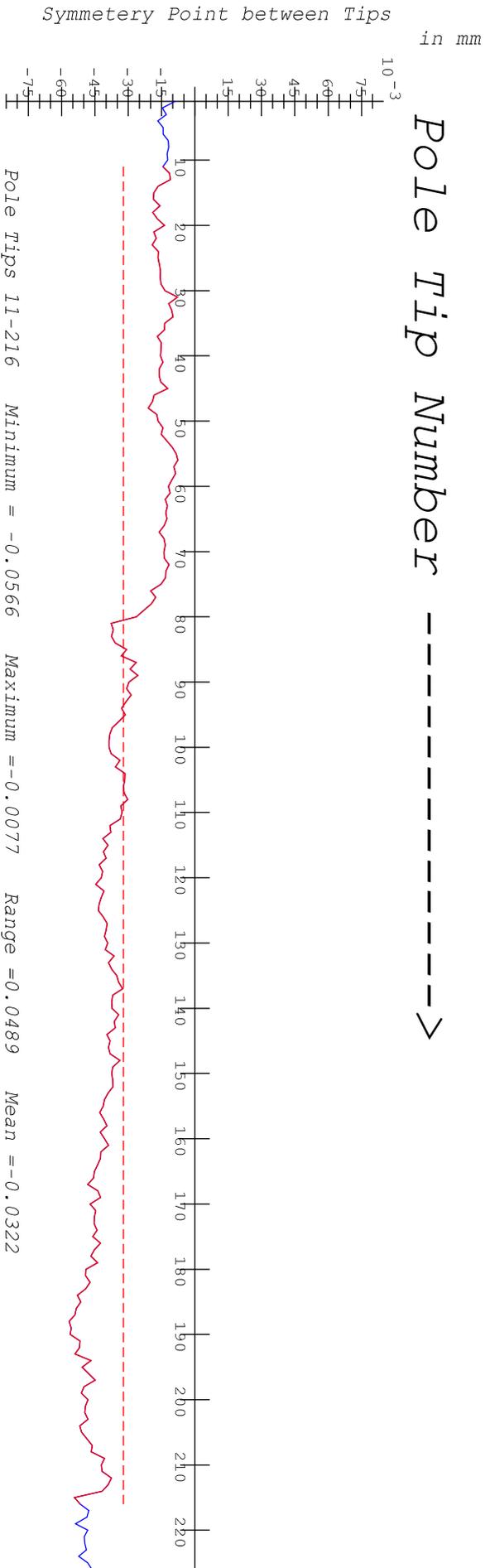
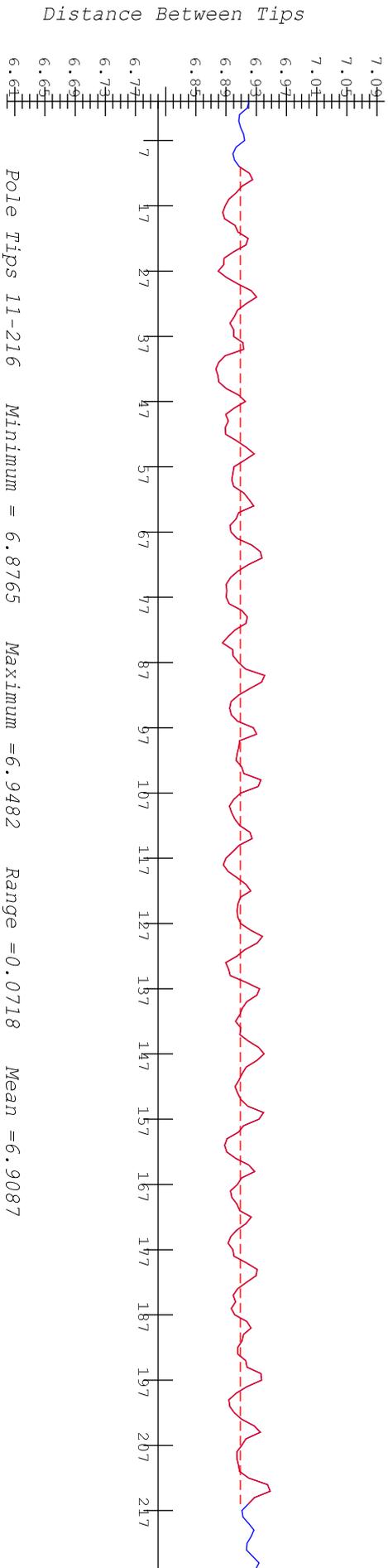
Inprocess Shim Check  
6.8mm Gap Undulator

DATE: 11-APR-2012

UNDULATOR # 32

DATASET # 0005

PROGRAM VERSION 3.0



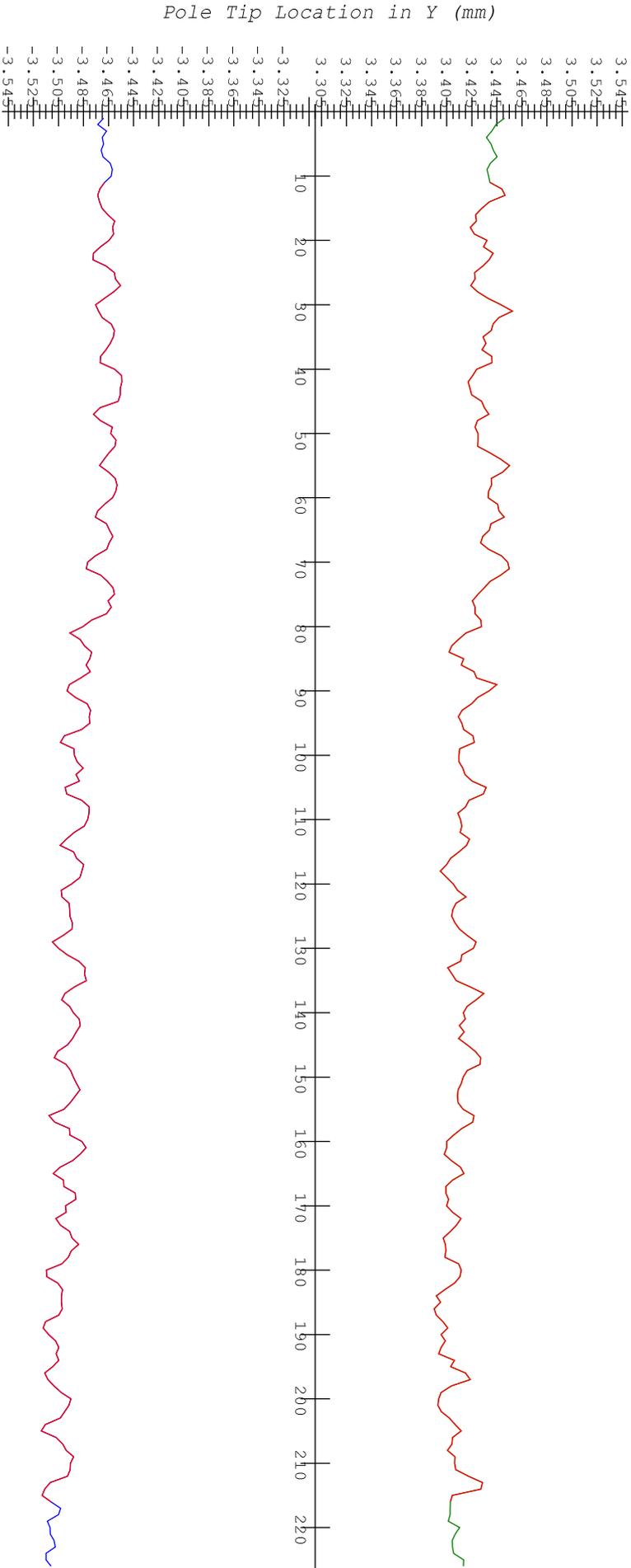
Symmetry Point is the symmetry point between the Upper and Lower Pole Tips were they intersect a YZ plane at the Magnetic C\L  
 Broken Red line is Mean Value of Symmetry Points and Mean Value of Gap Distance  
 Distance Between Tips is the distance between the Upper and Lower Pole Tips were they intersect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



Undulator Pole Tip Location  
 Inprocess Shim Check  
 6.8mm Gap Undulator

DATE: 11-APR-2012  
 UNDULATOR # 32  
 DATASET # 0005  
 PROGRAM VERSION 3.0

Pole Tips 11-216 Minimum = 3.3949 Maximum = 3.4575 Range = 0.0625



Pole Tip Number ----->

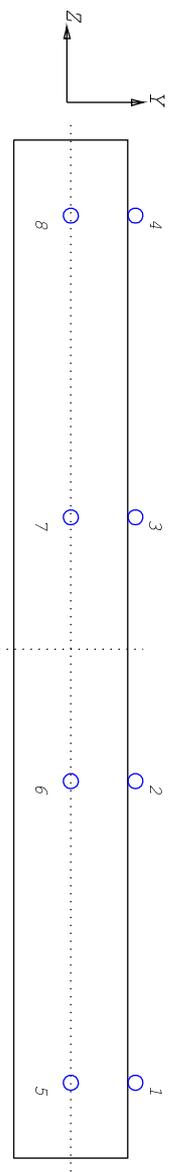
Green + Red = The position of the Upper Pole Tips at Magnetic C/L (Pole Tips 11-216 in Red)  
Blue + Red = The position of the Lower Pole Tips at Magnetic C/L (Pole Tips 11-216 in Red)



### Undulator Pole Tip Location

Inprocess Shim Check  
6.8 mm Gap Undulator

DATE: 11-APR-2012  
UNDULATOR # 32  
DATASET # 0005  
PROGRAM VERSION 3.0



Top Magnetic Structure       $\overline{C/L \text{ Offset}}$        $\overline{\text{Length}}$   
 Bottom Magnetic Structure      -0.587      3380.730  
 Strongback      0.000      3399.796

Dimensions in mm      Angles in mrad

----- TOOLING BALL LOCATIONS -----

NUM.	X	Y	Z
1	-0.0435	179.8327	-1558.600
2	-0.0551	179.7212	-585.0792
3	0.0680	179.6969	591.0236
4	0.0595	179.8158	1561.8300
5	248.2399	0.0833	-1558.580
6	248.3204	0.0118	-584.9601
7	248.3055	-0.0197	591.0716
8	248.2563	0.0317	1561.9226



Undulator Dimensional Fiducialization  
 Inprocess Shim Check  
 6.8MM Gap Undulator

DATE: 11-APR-2012  
 UNDUULATOR # 32  
 DATASET # 0005  
 PROGRAM VERSION 3.0