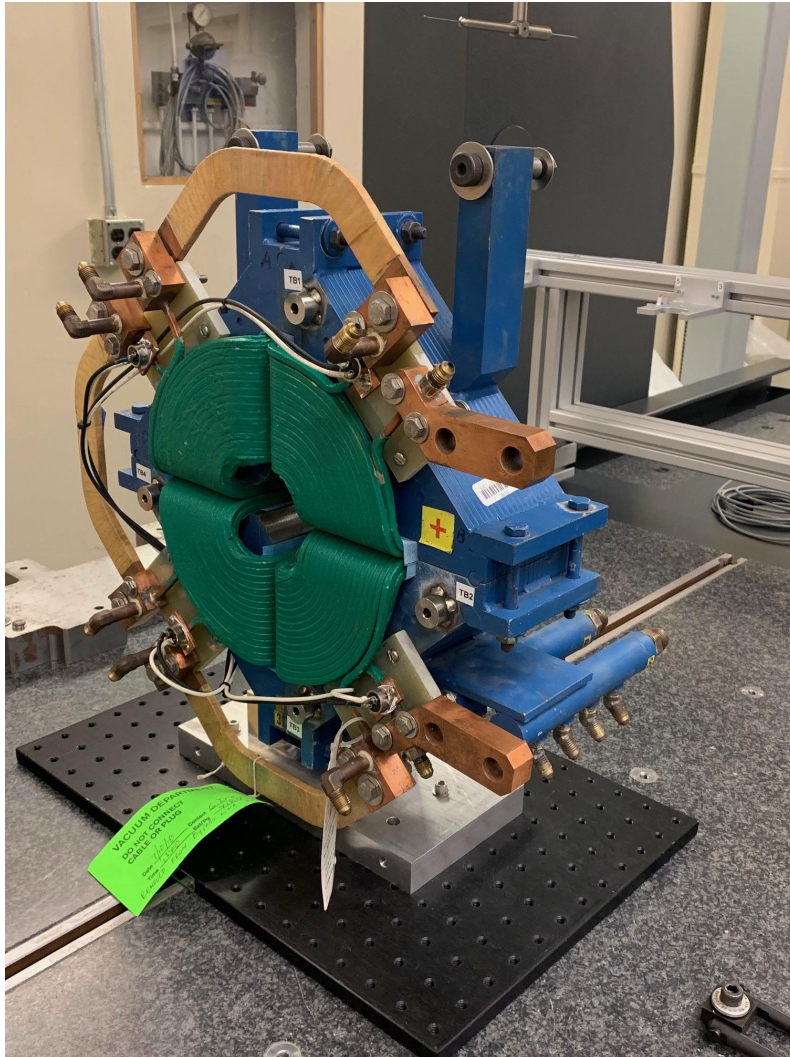


LCLS II 2Q4W Fiducialization Report



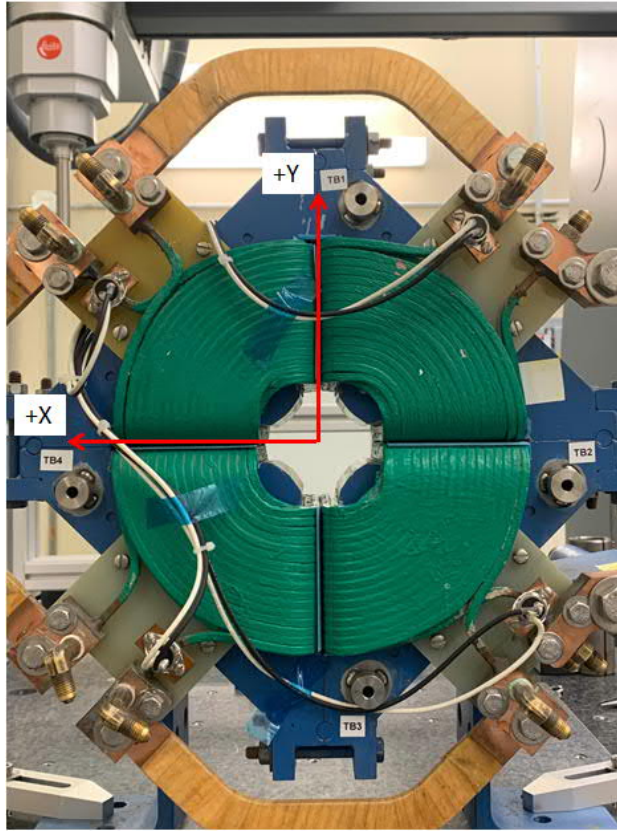
Inspector : K. Caban
Engineer : J. Amann
Drawing No. : SA-344-112-08
Barcode # : 4240
Mfg. S/N : #35

Coordinate System Setup

Spatial Alignment

The Spatial Alignment of the magnet is created through a composite best-fit of the pole tips. Each pole tip scanned 0.150 inch inboard from the upstream magnet face and the downstream magnet face. A composite best-fit of the upstream poles and the downstream poles is made with the nominal pole tip shape and location. An axis is created through the two best-fit centerpoints. This axis is the spatial alignment of the magnet and defines the Z axis.

Tooling Ball Locations



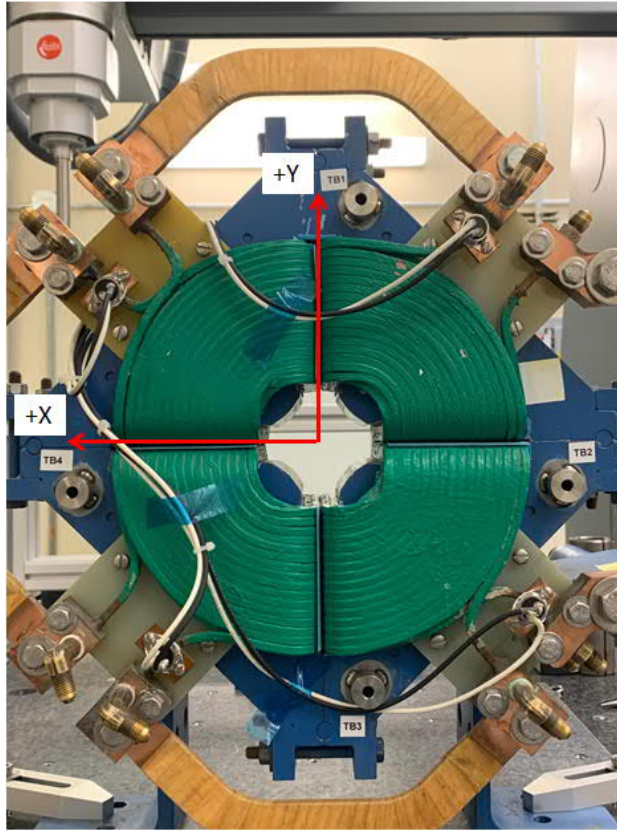
Tooling Ball	X Coord.	Y Coord.	Z Coord.
TB 1	-1.0075	5.4911	-3.4416
TB 2	-5.5005	-0.9952	-3.4417
TB 3	-1.0058	-5.5009	-3.4414
TB 4	5.4997	-1.0333	-3.4427

Tooling Ball Locations are 1 inch above Tooling Ball Adapter Plane
Dimensions in Inch

Barcode # : 4240

Mfg. S/N : #35

Tooling Ball Locations



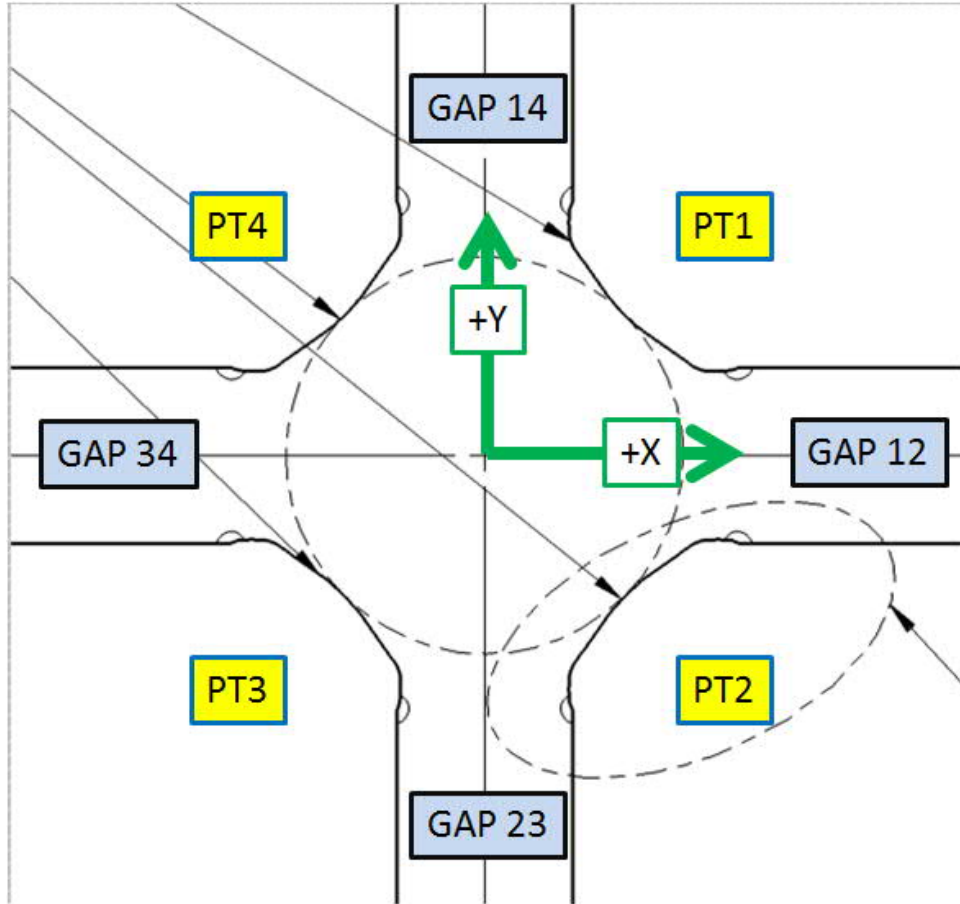
Tooling Ball	X Coord.	Y Coord.	Z Coord.
TB 1	-1.0080	5.4914	-2.7520
TB 2	-5.4991	-0.9945	-2.7529
TB 3	-1.0063	-5.4943	-2.7532
TB 4	5.5001	-1.0296	-2.7519

Tooling Ball Locations are 5/16 inch above Tooling Ball Adapter Plane
Dimensions in Inch

Barcode # : 4240

Mfg. S/N : #35

Pole Tip Gap Measurements



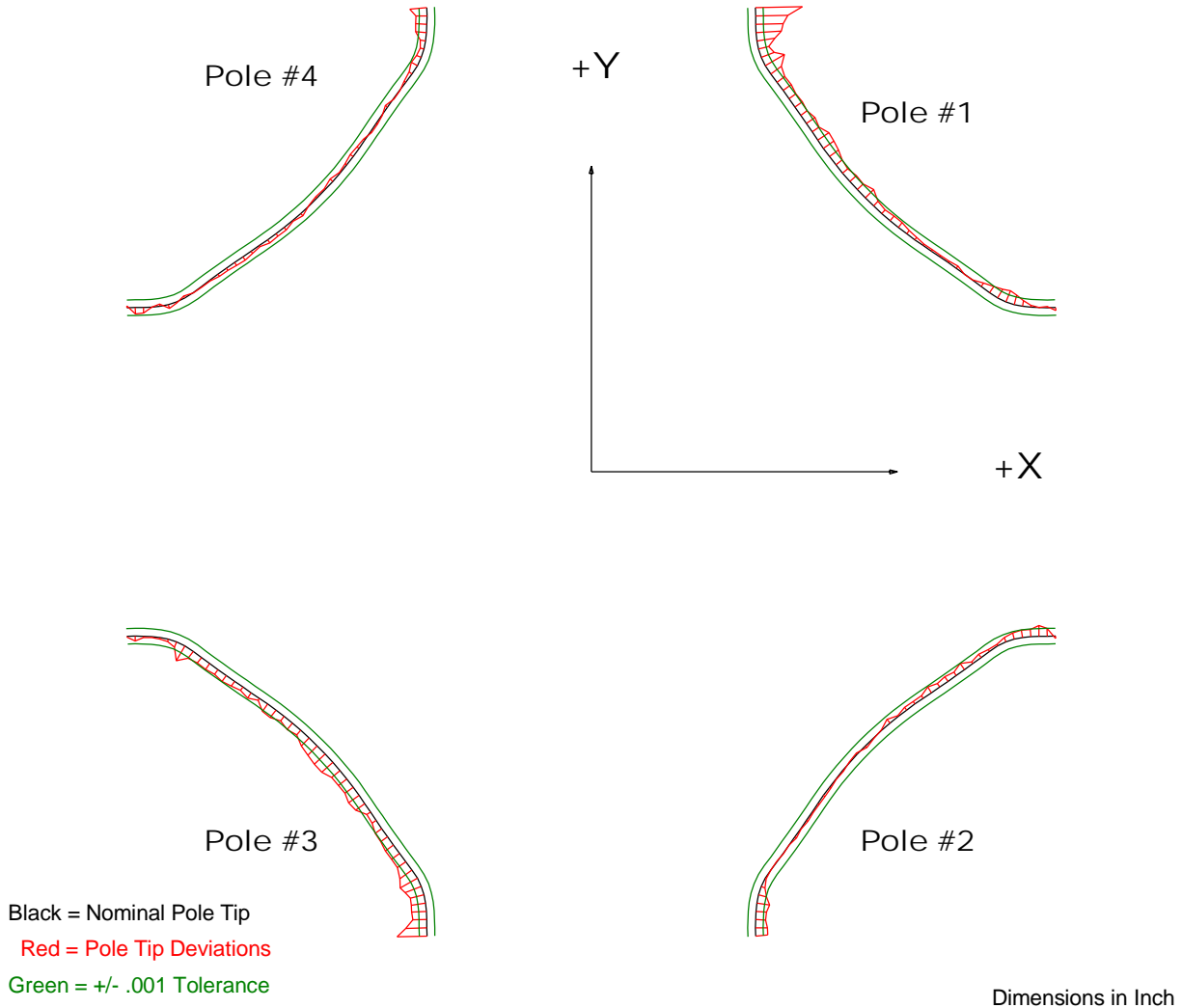
	Nominal Distance	Downstream Pole End	Upstream Pole End
PT Distance 1-3	2.026	2.0291	2.0274
PT Distance 2-4	2.026	2.0265	2.027
Gap 1-2	0.8602	0.8561	0.855
Gap 2-3	0.8602	0.8624	0.865
Gap 3-4	0.8602	0.8585	0.8588
Gap 1-4	0.8602	0.8638	0.8647

Dimensions in Inch

Barcode # : 4240

Mfg. S/N : #35

Composite Best-fit of Pole Tips, Downstream



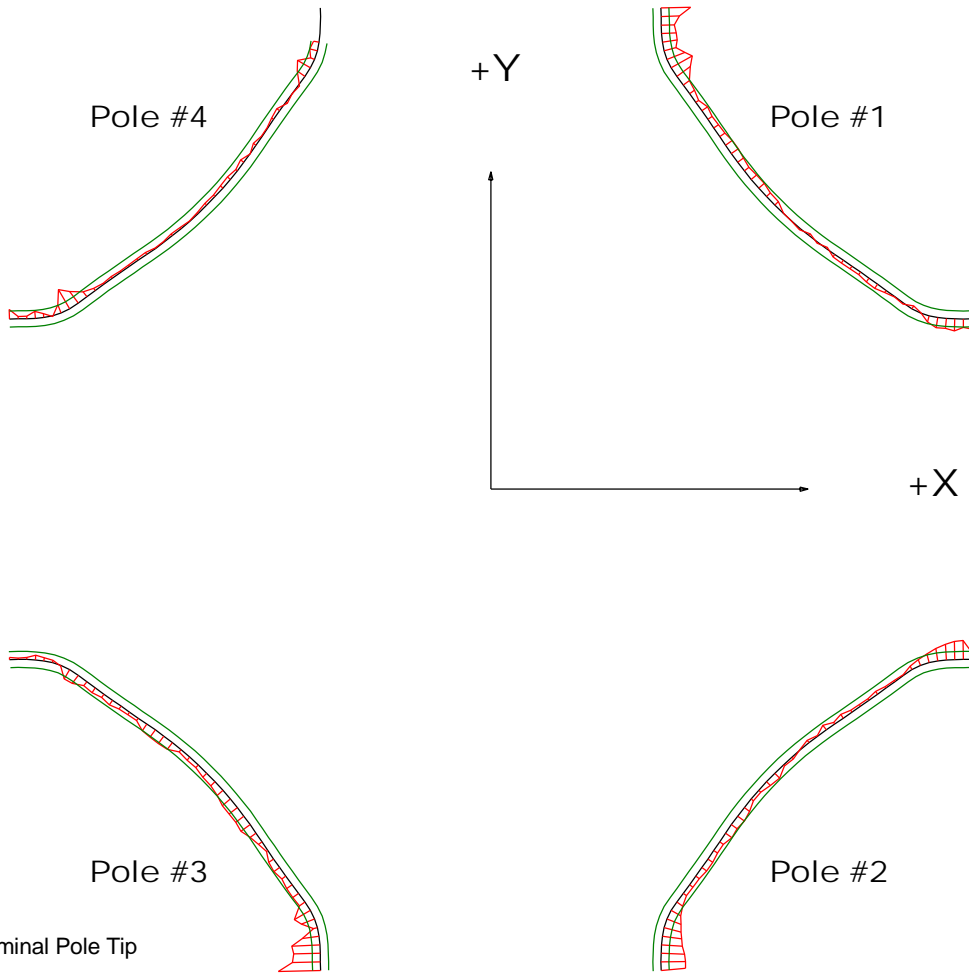
Pole Tip Deviations

Pole Tip	#1	#2	#3	#4
Min. Dev.	-0.006	-0.0016	-0.0039	-0.0022
Max. Dev.	0.0004	0.0014	-0.0001	0.0008

Barcode # : 4240

Mfg. S/N : #35

Composite Best-fit of Pole Tips, Upstream



Black = Nominal Pole Tip
 Red = Pole Tip Deviations
 Green = +/- .001 Tolerance

Dimensions in Inch

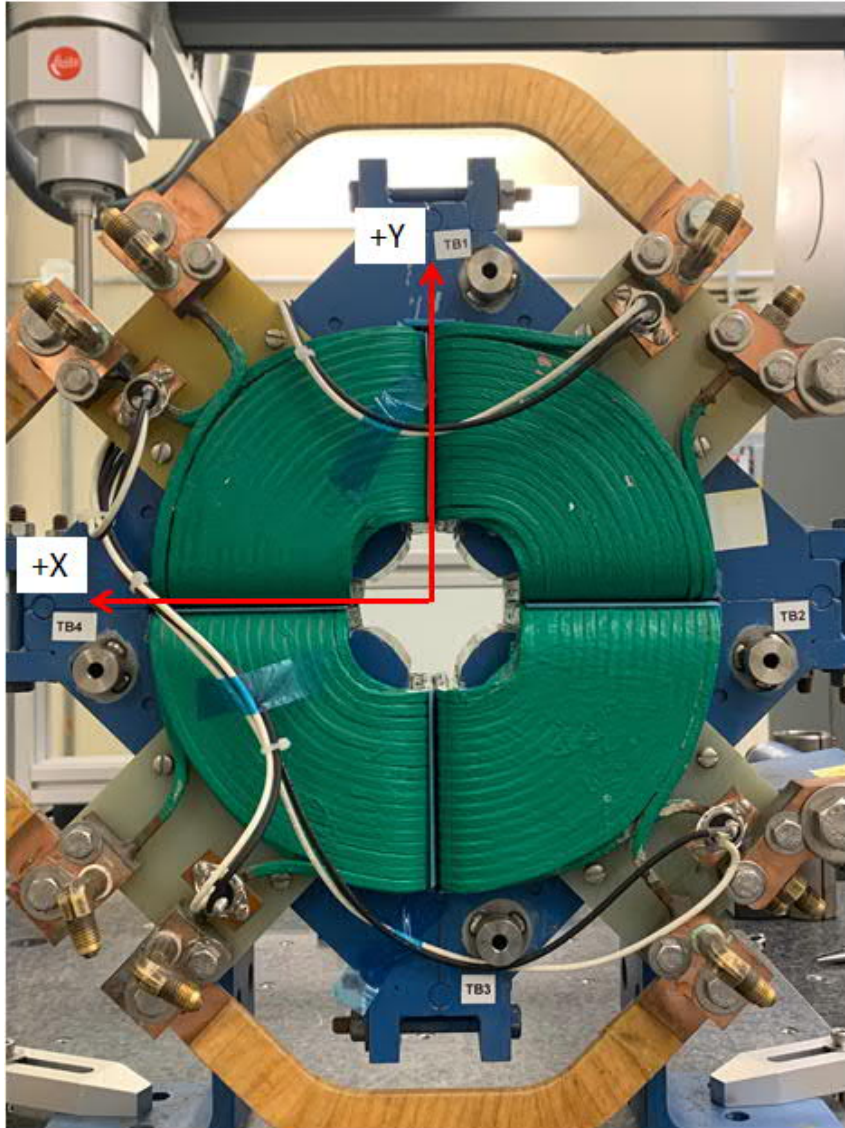
Pole Tip Deviations

Pole Tip	#1	#2	#3	#4
Min. Dev.	-0.0037	-0.0031	-0.0053	-0.0028
Max. Dev.	0.0015	0.0023	0.0006	0.0003

Barcode # : 4240

Mfg. S/N : #35

Angle of the Composite Pole Tip Best-Fit



in Decimal Degrees ° :