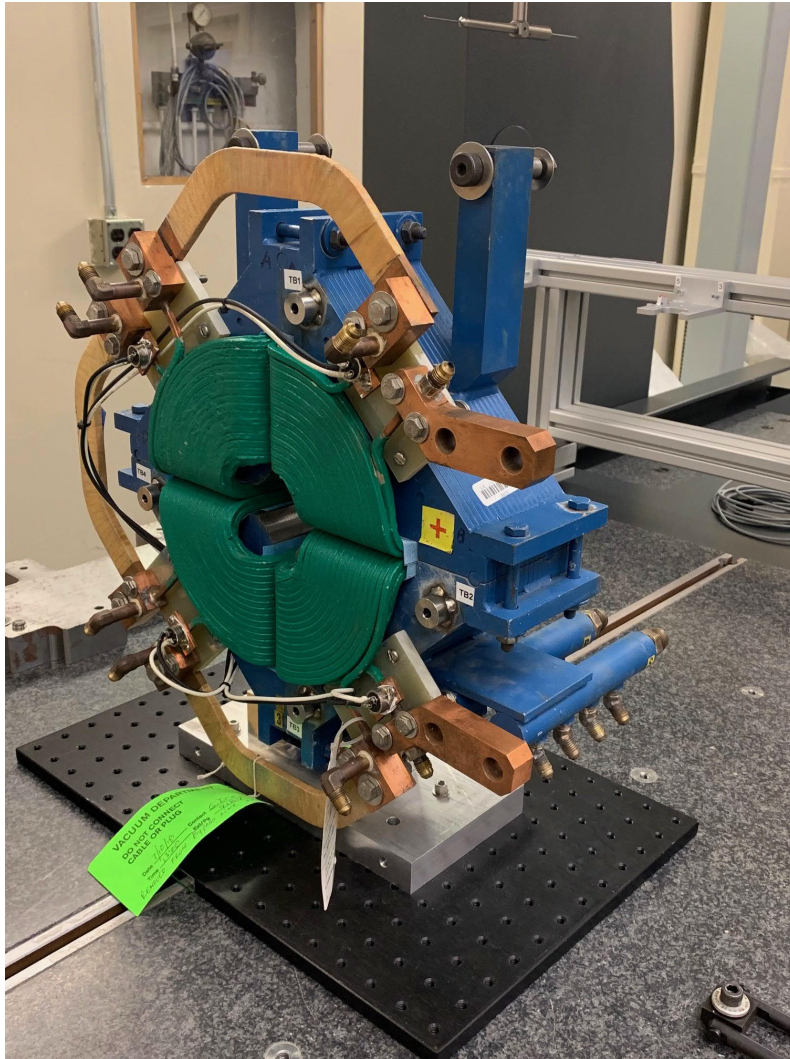


LCLS II 2Q4W Fiducialization Report



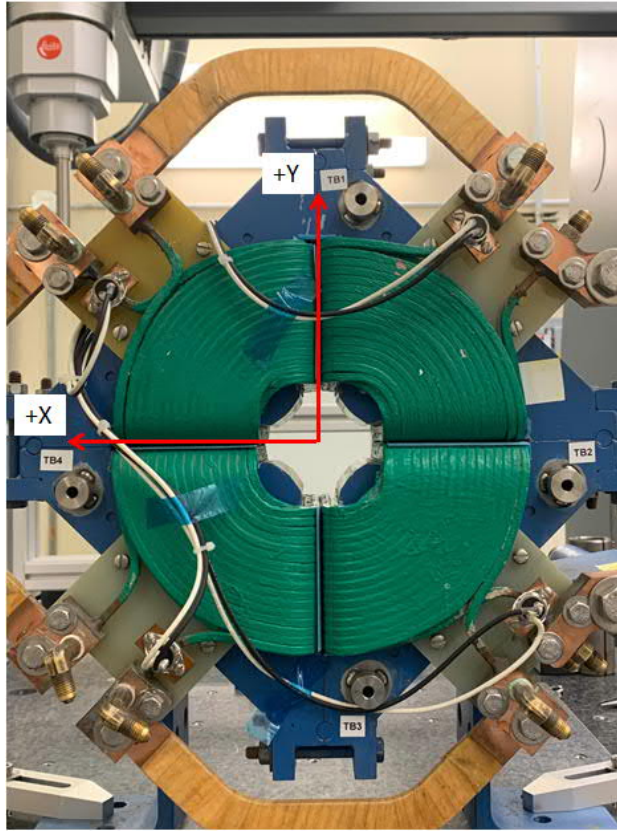
Inspector : K. Caban
Engineer : J. Amann
Drawing No. : SA-344-112-08
Barcode # : 4241
Mfg. S/N : #37

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



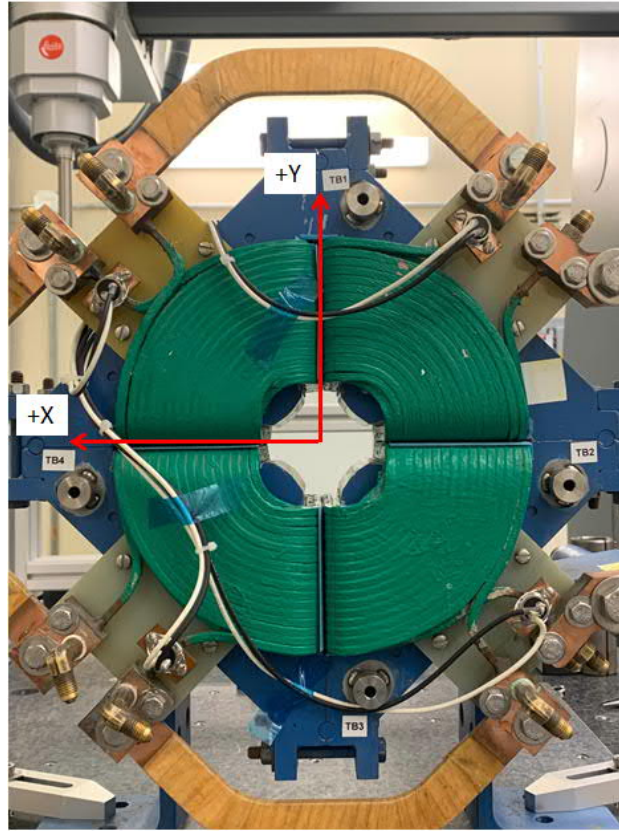
Tooling Ball	X Coord.	Y Coord.	Z Coord.
TB 1	-0.9911	5.5217	-3.4444
TB 2	-5.5354	-0.9917	-3.4451
TB 3	-1.0145	-5.4895	-3.4414
TB 4	5.5122	-0.9916	-3.4393

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

Barcode # : 4241

Mfg. S/N : #37

Tooling Ball Locations



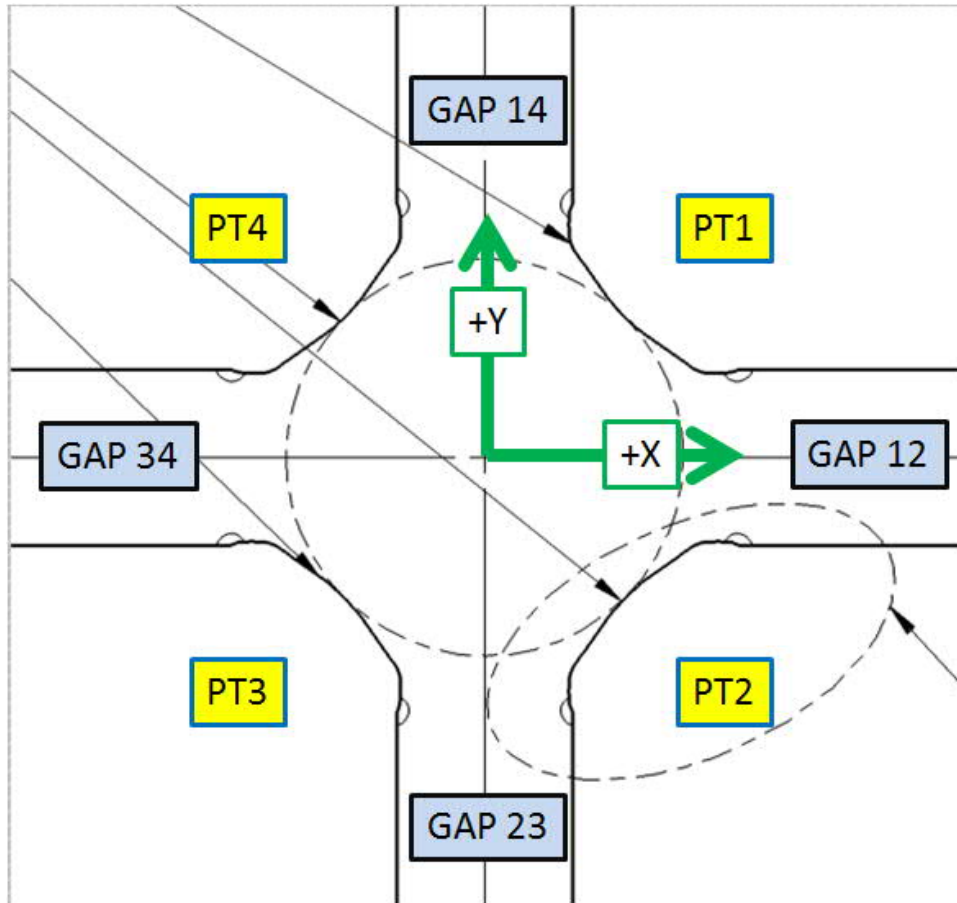
Tooling Ball	X Coord.	Y Coord.	Z Coord.
TB 1	-0.9927	5.5214	-2.7562
TB 2	-5.5304	-0.9912	-2.7547
TB 3	-1.0128	-5.4866	-2.7534
TB 4	5.5084	-0.9894	-2.7510

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

Barcode # : 4241

Mfg. S/N : #37

Pole Tip Gap Measurements



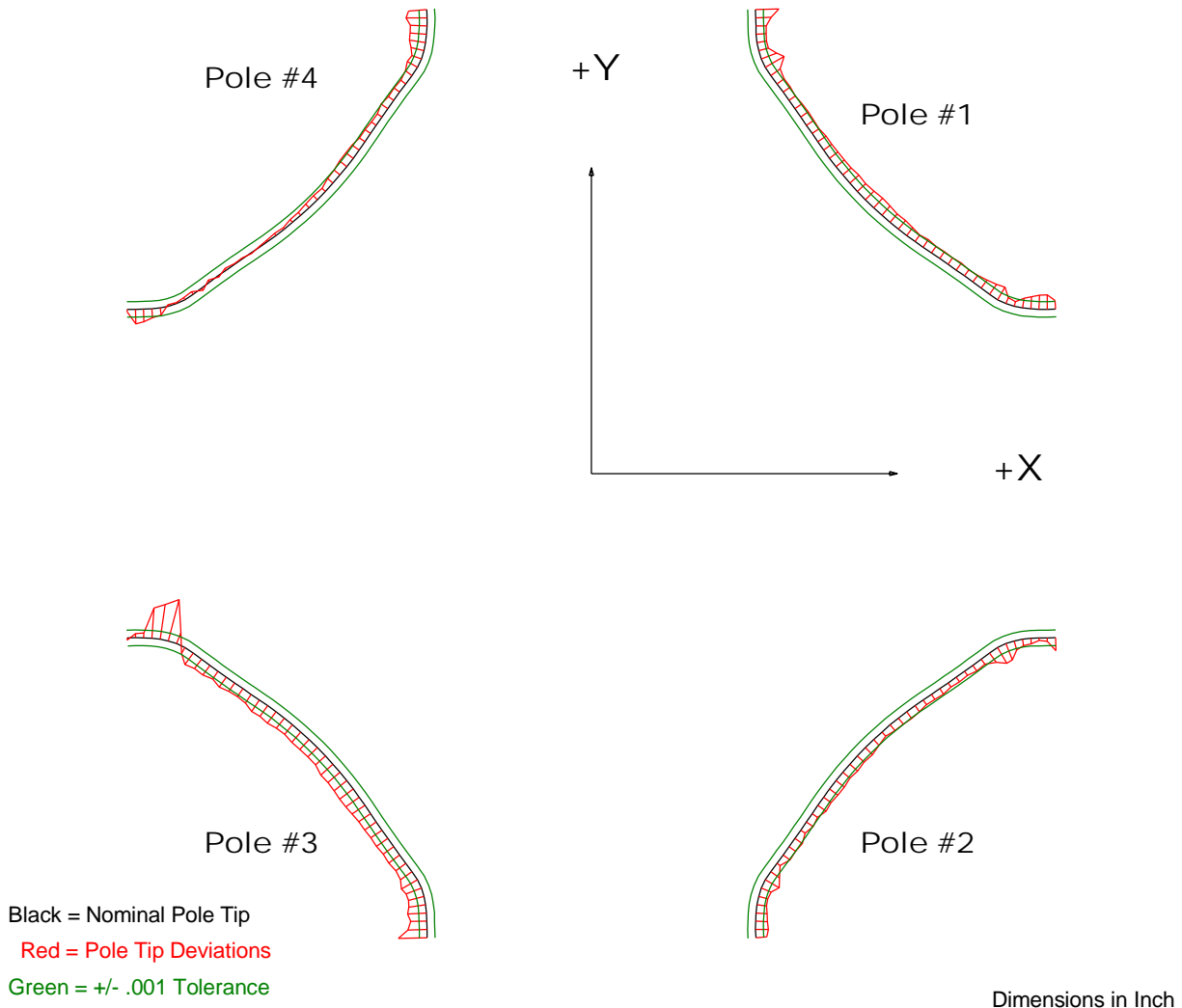
	Nominal Distance	Downstream Pole End	Upstream Pole End
PT Distance 1-3	2.026	2.0293	2.0276
PT Distance 2-4	2.026	2.028	2.0273
Gap 1-2	0.8602	0.8579	0.856
Gap 2-3	0.8602	0.8562	0.8626
Gap 3-4	0.8602	0.8538	0.857
Gap 1-4	0.8602	0.8628	0.8628

Dimensions in Inch

Barcode # : 4241

Mfg. S/N : #37

Composite Best-fit of Pole Tips, Downstream



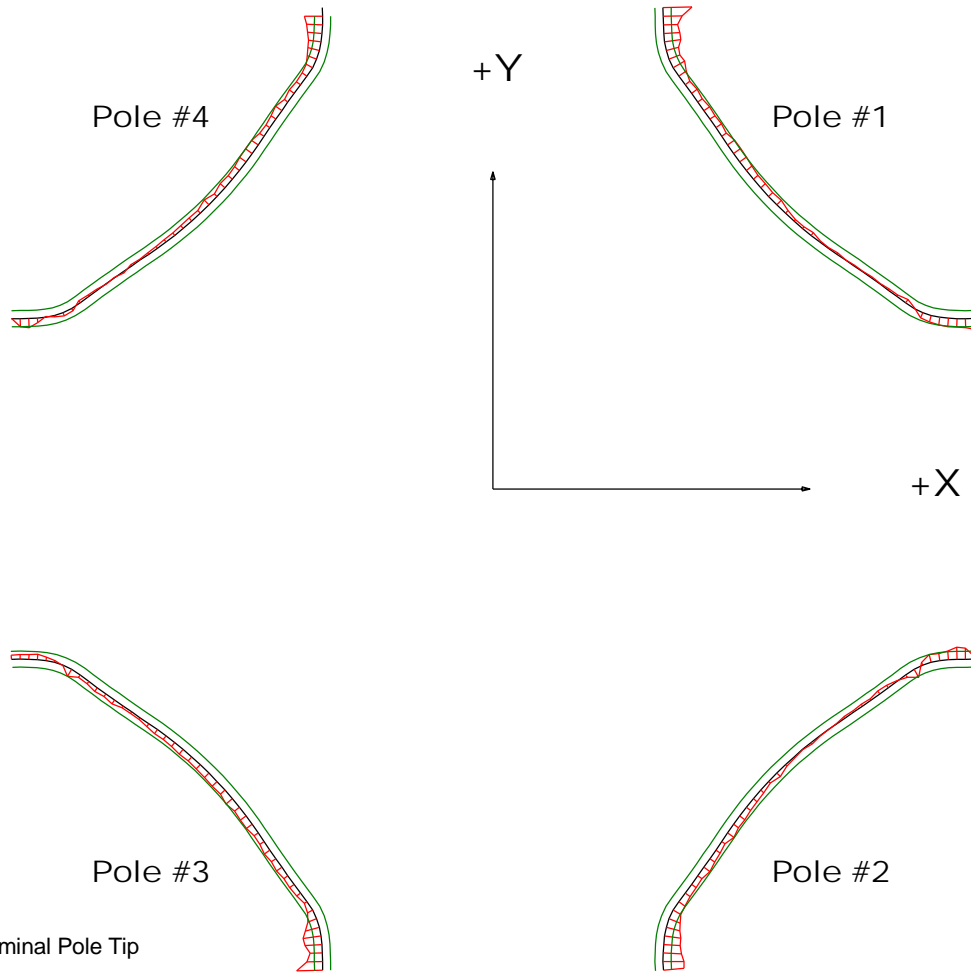
Pole Tip Deviations

Pole Tip	#1	#2	#3	#4
Min. Dev.	-0.003	-0.0023	-0.0037	-0.0027
Max. Dev.	-0.0006	-0.0003	0.0055	0.0019

Barcode # : 4241

Mfg. S/N : #37

Composite Best-fit of Pole Tips, Upstream



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

Dimensions in Inch

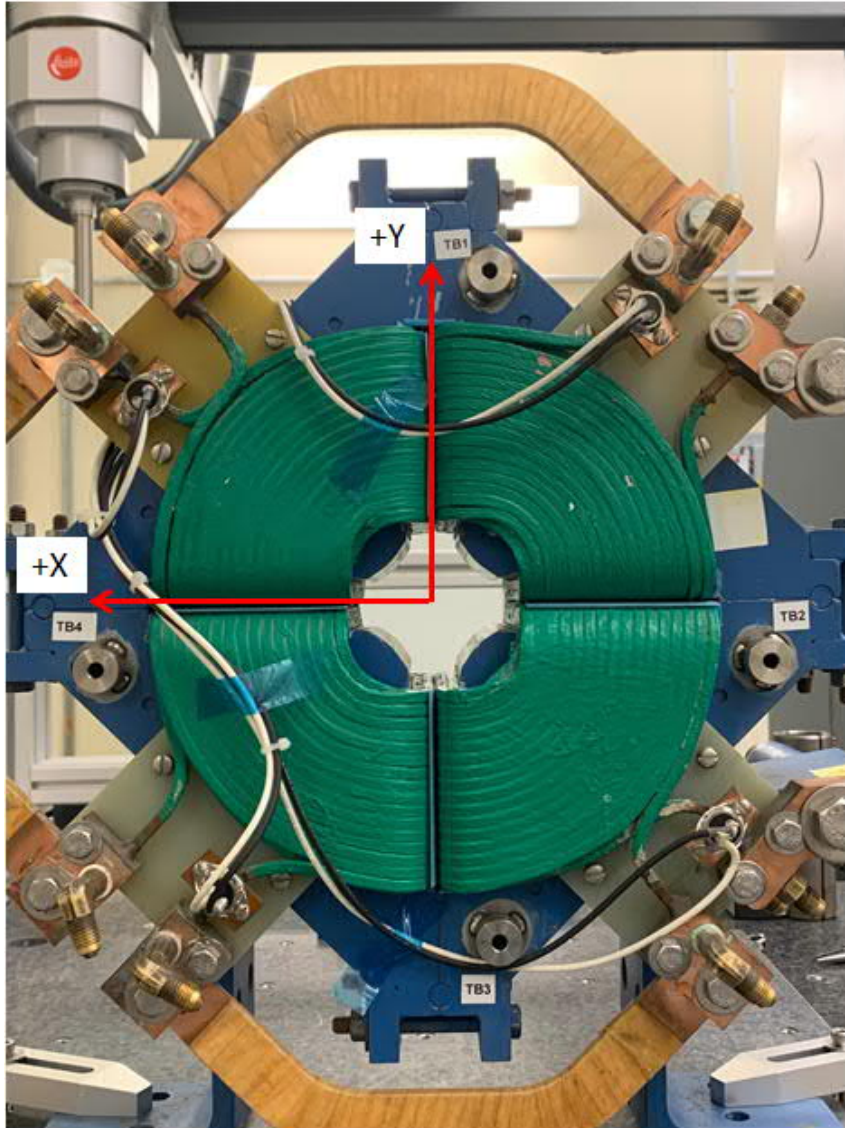
Pole Tip Deviations

Pole Tip	#1	#2	#3	#4
Min. Dev.	-0.0036	-0.0026	-0.0033	-0.0023
Max. Dev.	0.0014	0.0015	0.0007	0.0012

Barcode # : 4241

Mfg. S/N : #37

Angle of the Composite Pole Tip Best-Fit



in Decimal Degrees ° :