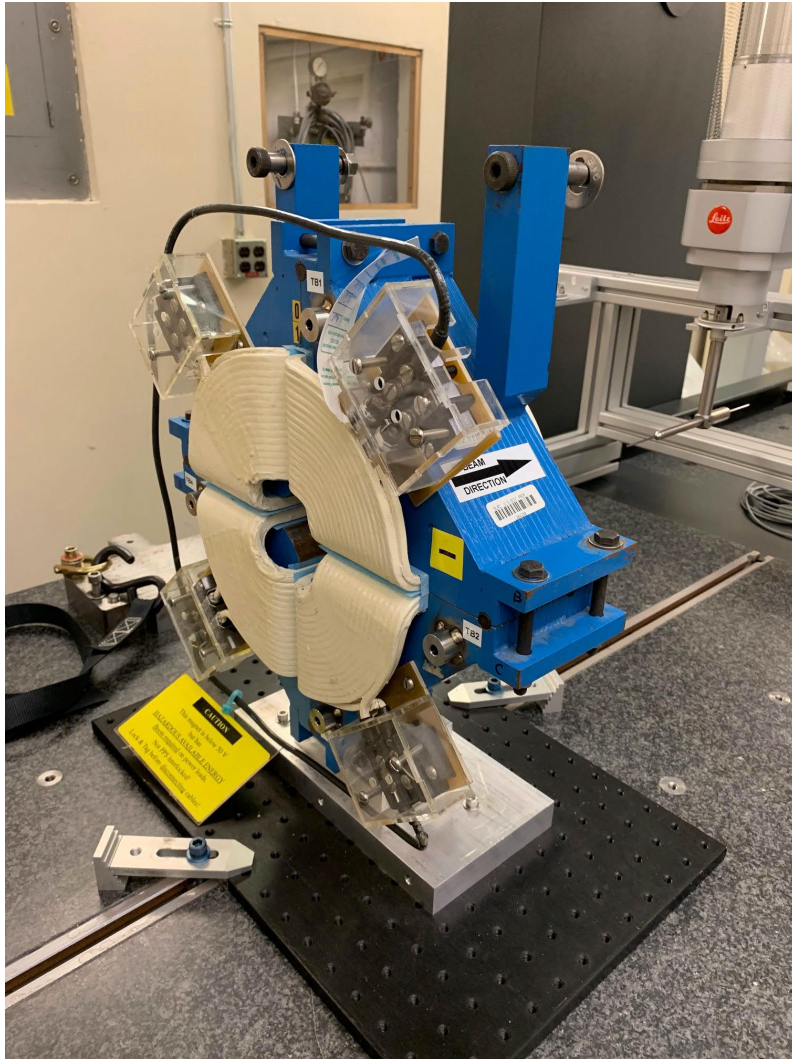


LCLS II 2Q4 Fiducialization Report



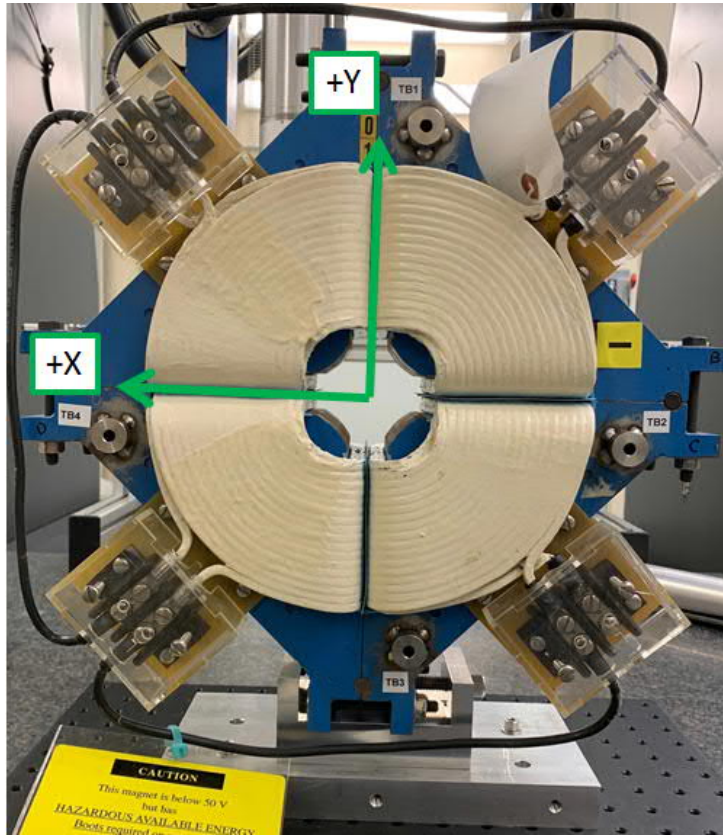
Inspector : K. Caban
Engineer : J. Amann
Drawing No. : SA-344-112-01
Barcode # : 4228
Mfg. S/N : #09

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



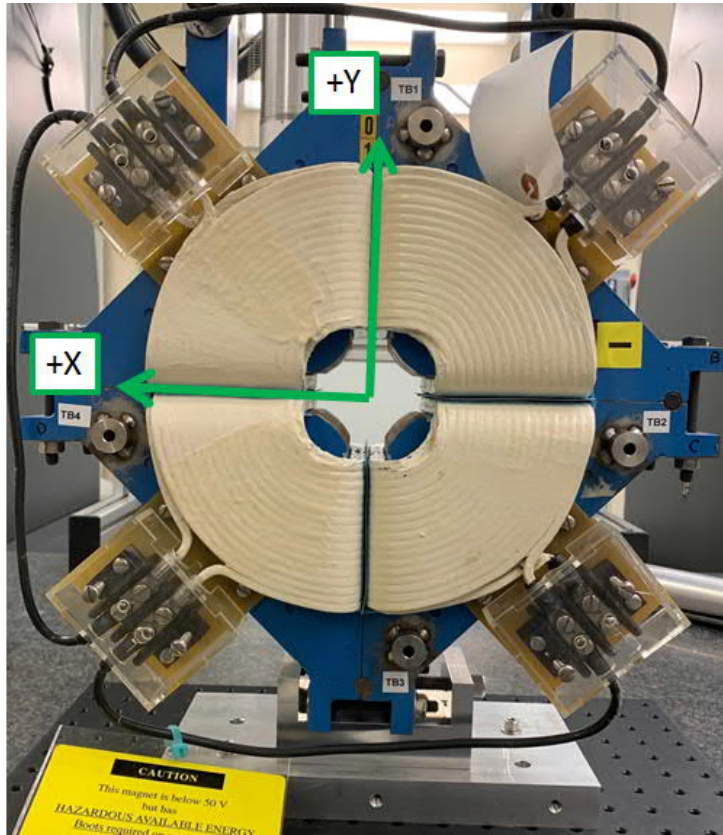
Tooling Ball	X Coord.	Y Coord.	Z Coord.
TB 1	-0.9904	5.5031	-3.4337
TB 2	-5.5030	-0.9901	-3.4342
TB 3	-1.0143	-5.5034	-3.4358
TB 4	5.5026	-1.0136	-3.4361

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

Barcode # : 4228

Mfg. S/N : #09

Tooling Ball Locations



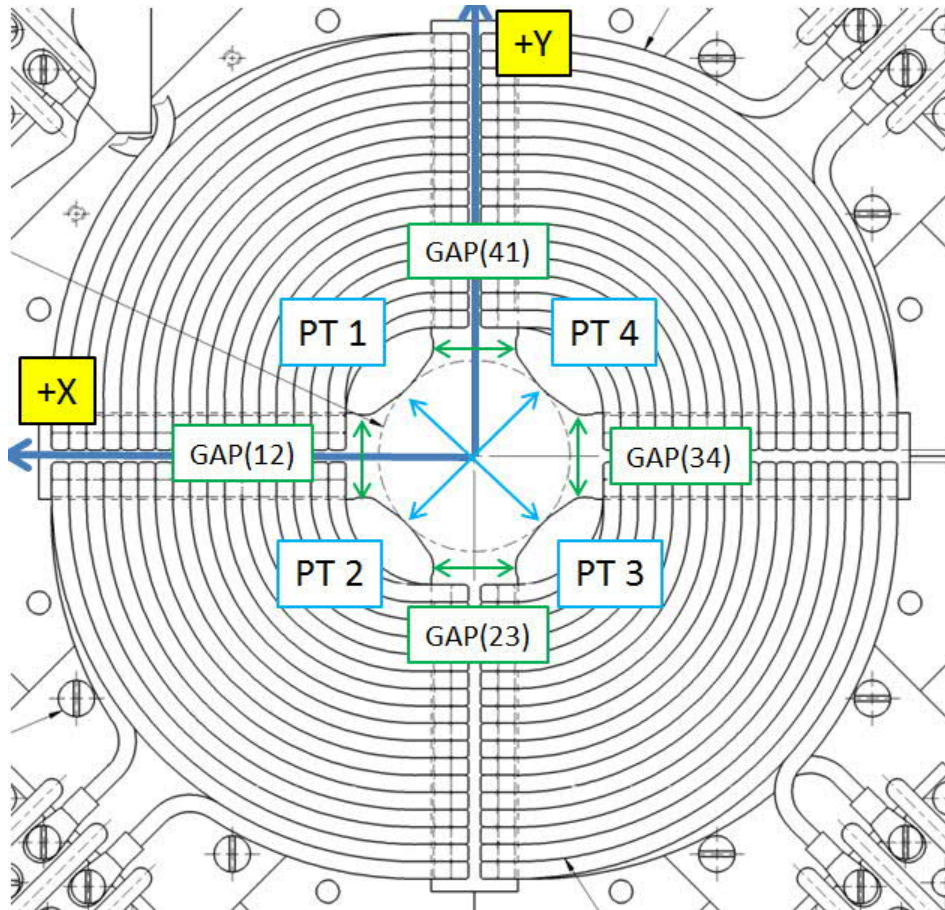
Tooling Ball	X Coord.	Y Coord.	Z Coord.
TB 1	-0.9915	5.5034	-2.7451
TB 2	-5.5034	-0.9875	-2.7467
TB 3	-1.0136	-5.5010	-2.7483
TB 4	5.5010	-1.0122	-2.7478

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

Barcode # : 4228

Mfg. S/N : #09

Pole Tip Gap Measurements



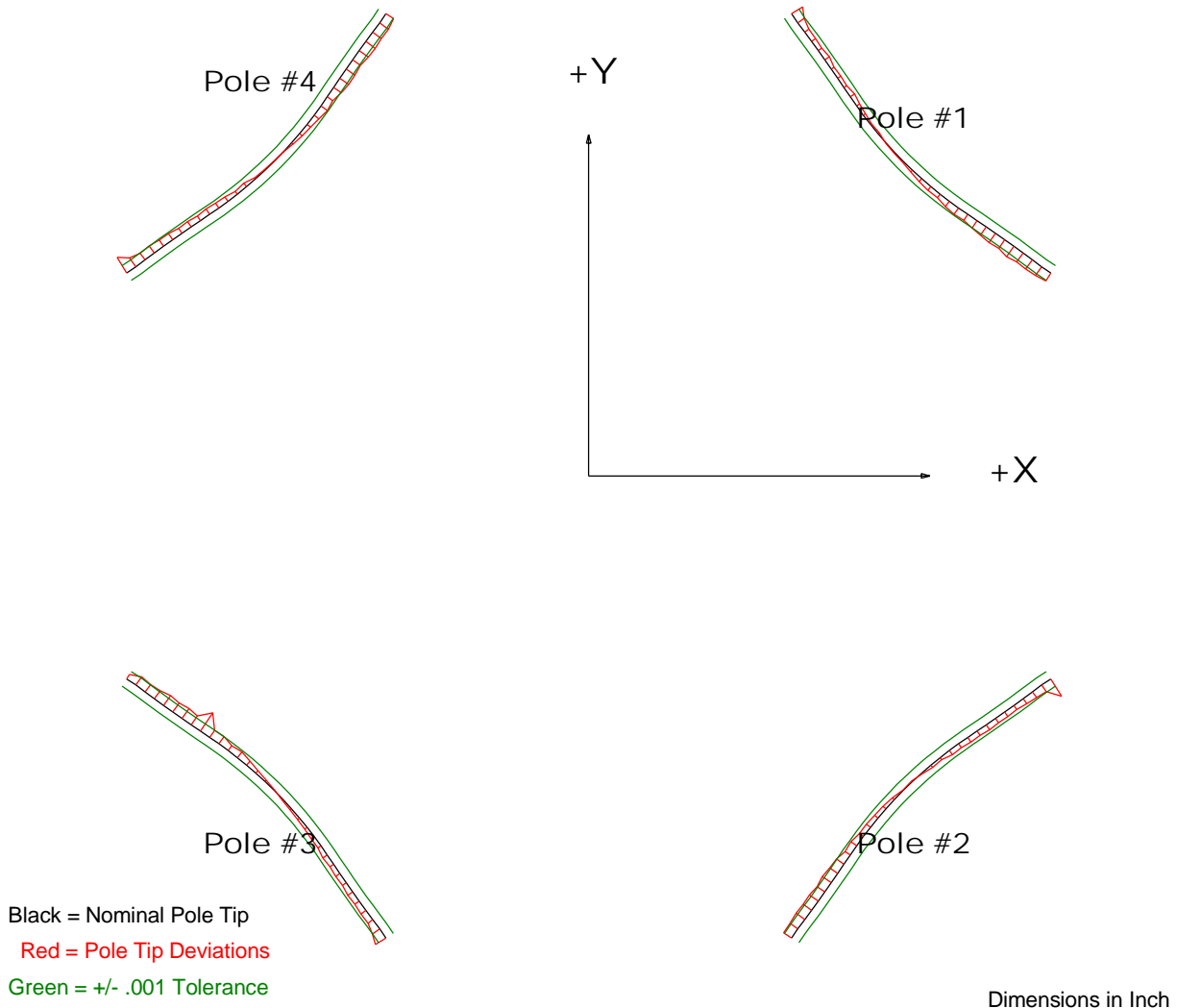
	Nominal Distance	Downstream Pole End	Upstream Pole End
PT Distance 1-3	2.086	2.0858	2.0874
PT Distance 2-4	2.086	2.0859	2.0878
Gap 1-2	0.900	0.912	0.9025
Gap 2-3	0.900	0.8964	0.9014
Gap 3-4	0.900	0.9034	0.9025
Gap 1-4	0.900	0.9003	0.9003

Dimensions in Inch

Barcode # : 4228

Mfg. S/N : #09

Composite Best-fit of Pole Tips, Downstream



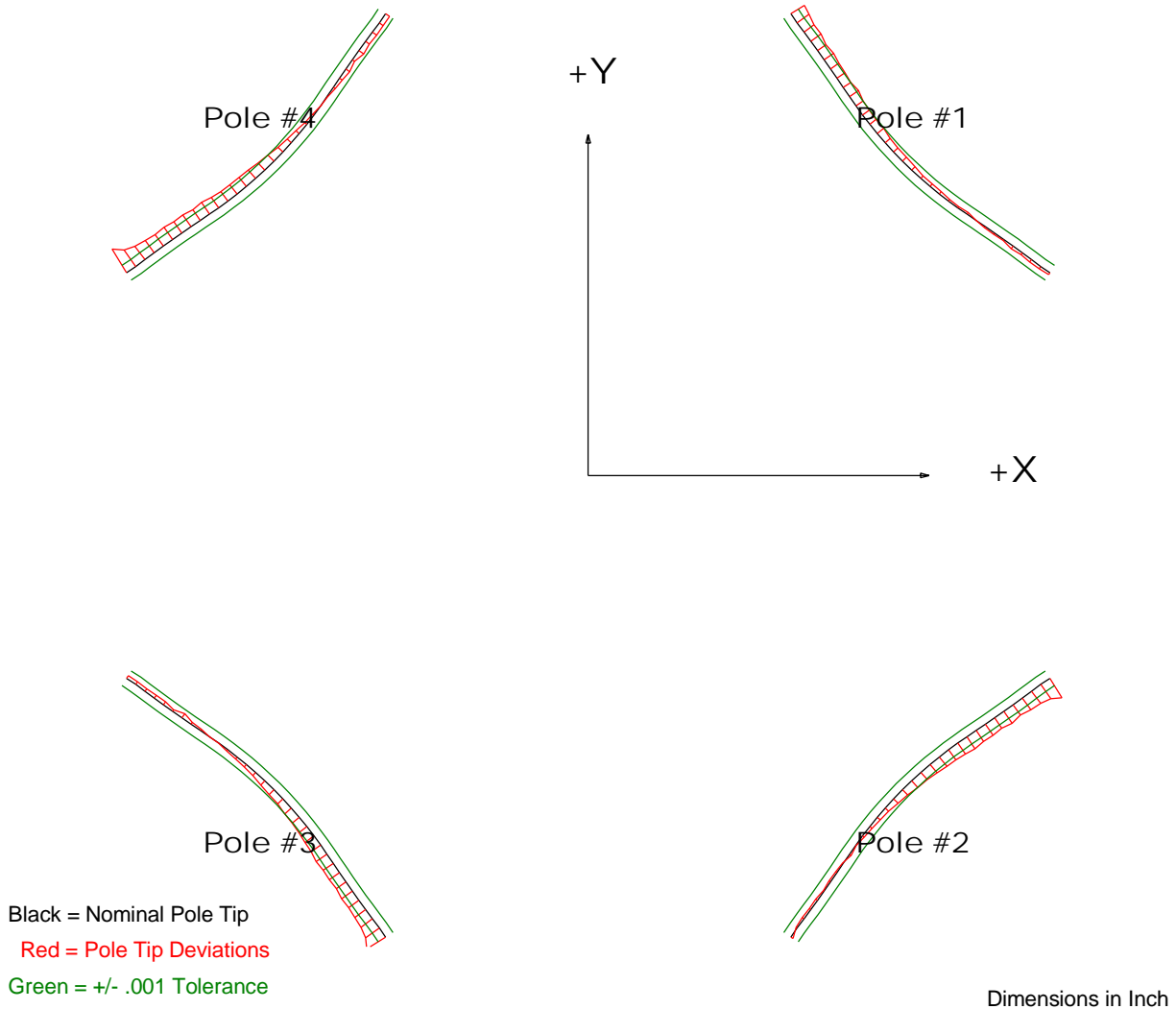
Pole Tip Deviations

Pole Tip	#1	#2	#3	#4
Min. Dev.	-0.0015	-0.0023	-0.0014	-0.0021
Max. Dev.	0.0015	0.0013	0.0025	0.0013

Barcode # : 4228

Mfg. S/N : #09

Composite Best-fit of Pole Tips, Upstream



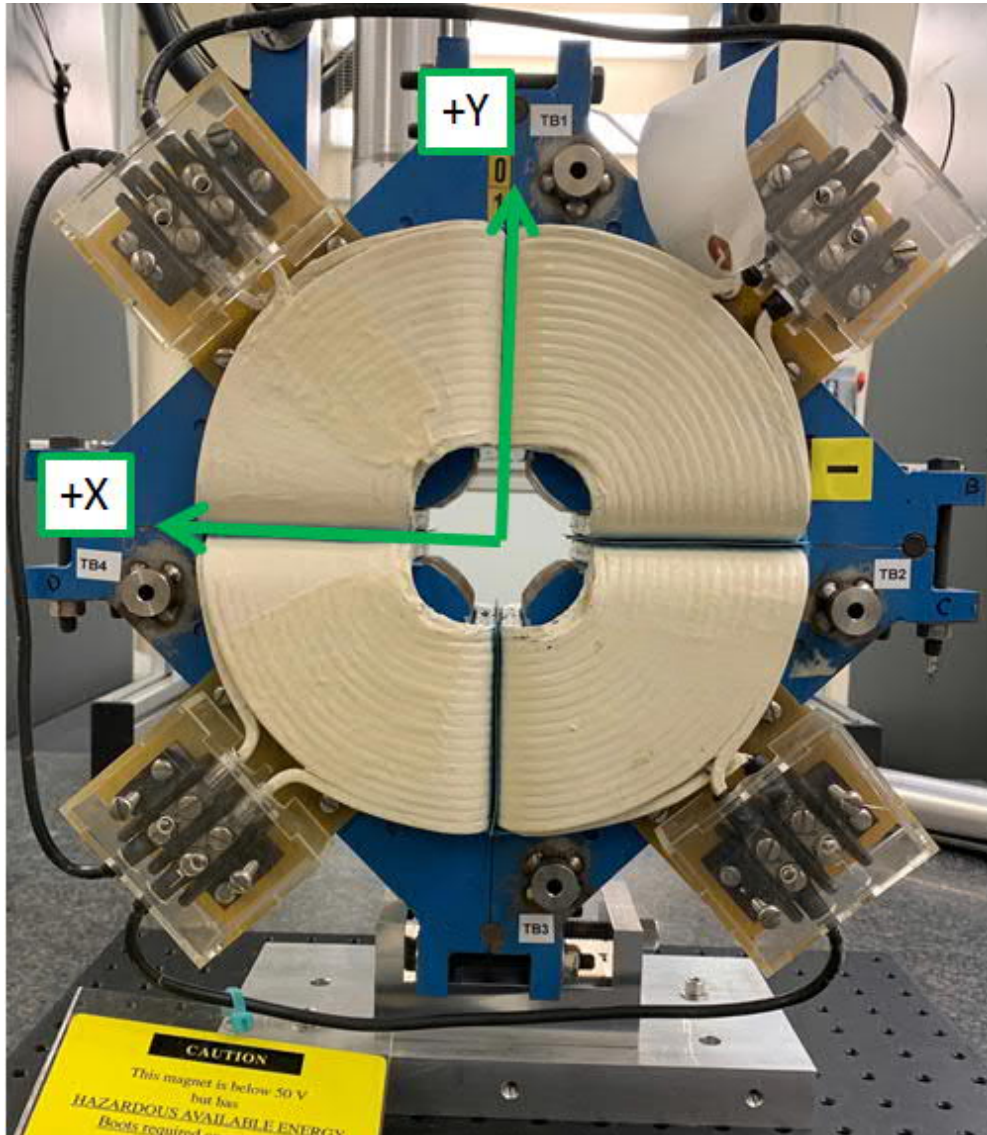
Pole Tip Deviations

Pole Tip	#1	#2	#3	#4
Min. Dev.	-0.0018	-0.0027	-0.0026	-0.0032
Max. Dev.	0.0004	0.0003	0.0006	0.0007

Barcode # : 4228

Mfg. S/N : #09

Angle of the Composite Pole Tip Best-Fit



in Decimal Degrees ° :