

LCLS II Magnet Fiducialization Report XLEAP Dipole Magnet - 11mm Gap



Inspector : K. Caban
Engineer : J. Amann
Drawing No. : DRW-20171114-8425
Barcode # : 4553-BCXXL4
Mfg. S/N : SLM3_04

Coordinate System Setup

Spatial Alignment

Constructed using the Midplane of Upper (+Y) and Lower (-Y) Pole with the Midplane of the 2 Poles sets Y Zero and the Y+ Direction points towards the Tooling Balls/Terminal Strip.

Planar Alignment

Constructed using the Upstream (-Z) and Downstream (+Z) Ends of the poles. The Midplane from both ends sets Z Zero and +Z points towards TB 3/4 Side.

Coordinate Origins

X Origin - Symetry Plane between side poles planes (planes parallel to the Coils)

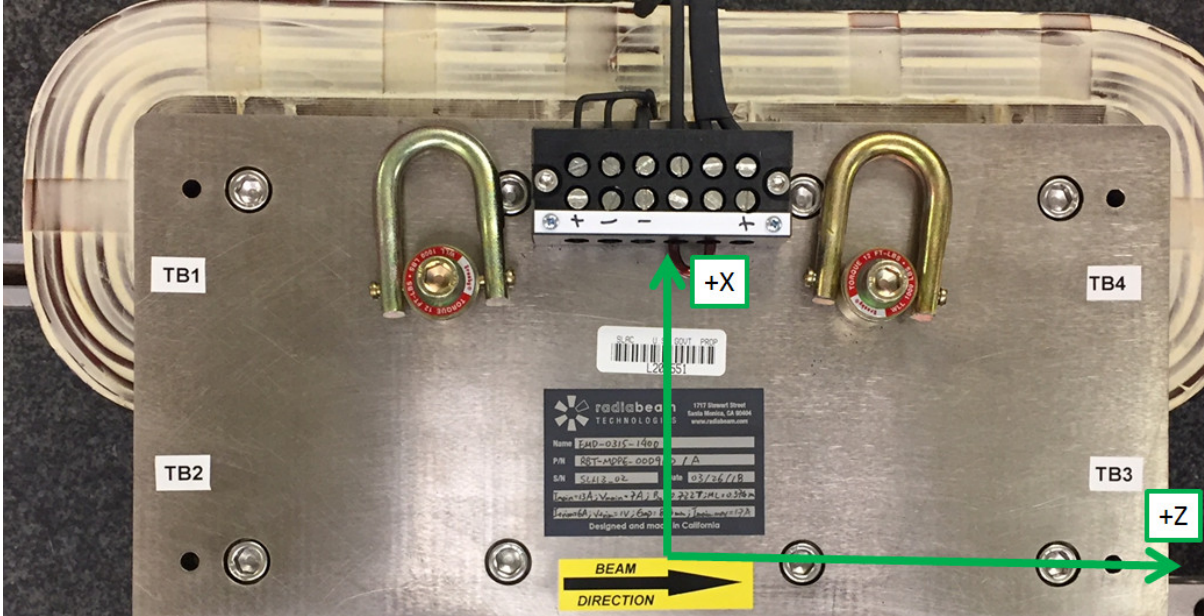
Y Origin - Symetry Plane between the Poles (.315 Gap Symetry)

Z Origin - Symmetry plane between Up Stream and Down Stream end surfaces

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Tooling Ball Locations



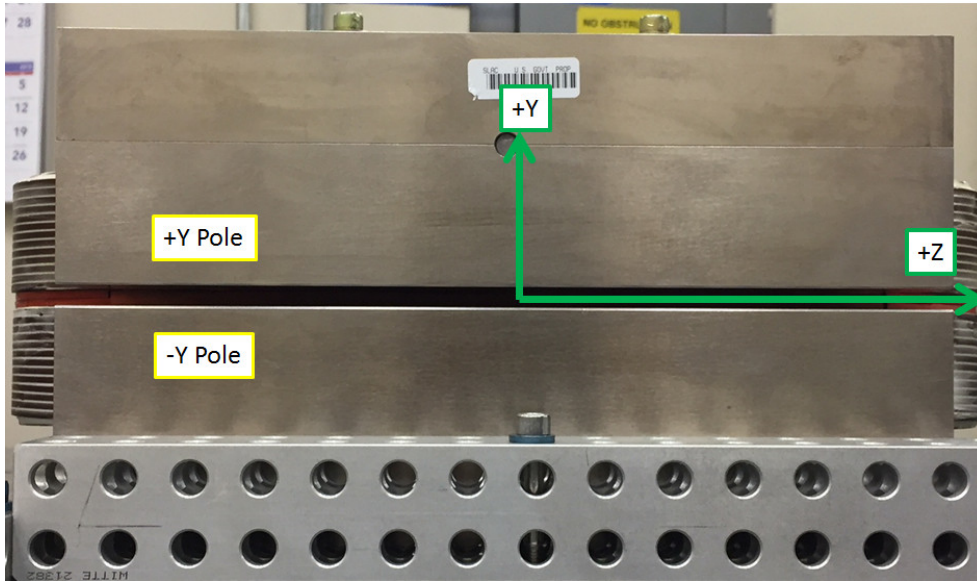
Tooling Ball	X Coord.	Y Coord.	Z Coord.
TB 1	4.9848	5.1339	-6.2490
TB 2	-0.0023	5.1345	-6.2497
TB 3	-0.0030	5.1347	6.2494
TB 4	4.9847	5.1340	6.2492
TB A	4.9849	4.4464	-6.2487
TB B	-0.0022	4.4470	-6.2497
TB C	-0.0027	4.4472	6.2496
TB D	4.9846	4.4465	6.2496

Tooling Ball Locations (1-4) are 1 inch above Tooling Ball Plane
 Tooling Ball Locations (A-D) are 5/16 inch above Tooling Ball Plane
 Dimensions in Inch

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Pole Gap Measurements, Flatness & Parallelism



	-Y Pole Fltns	+Y Pole Fltns	Pole Parallel	Avg. Gap	Min. Gap	Max. Gap
POLE DATA	0.0004	0.0004	0.0006	0.4303	0.4297	0.4306

Dimensions in Inch

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