

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



Inspector : K. Caban  
Engineer : J. Amann  
Drawing No. : DRW-20171114-8425  
Barcode # : 4550-BCXXXL1  
Mfg. S/N : SLM3\_01

## **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)

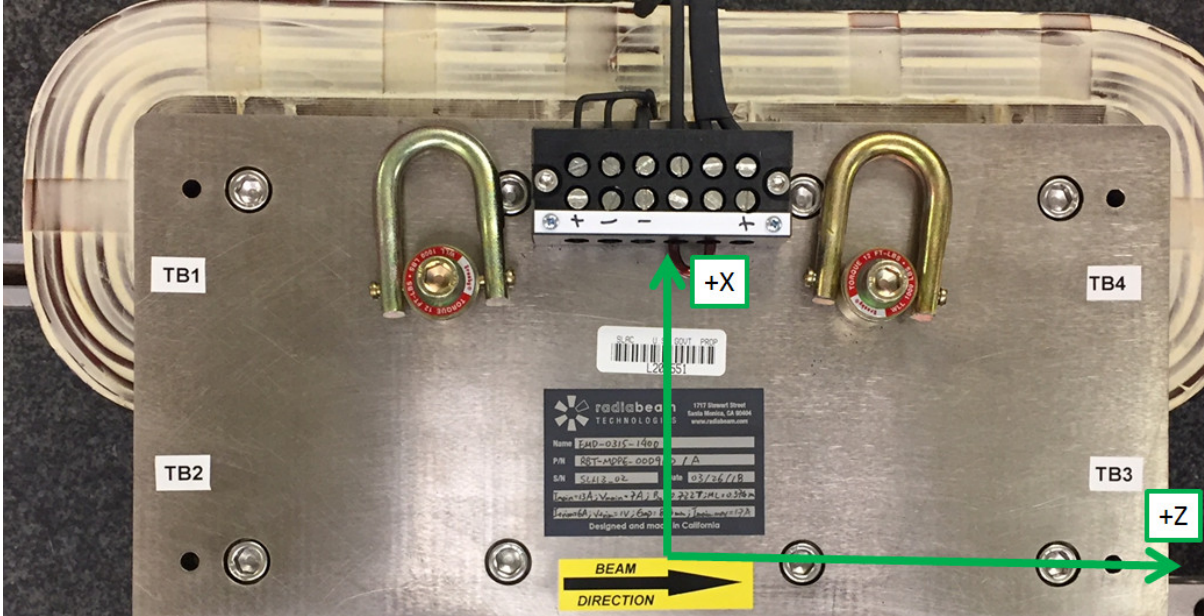
Y Origin - Symetry Plane between the Poles (.315 Gap Symetry)

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

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## Tooling Ball Locations



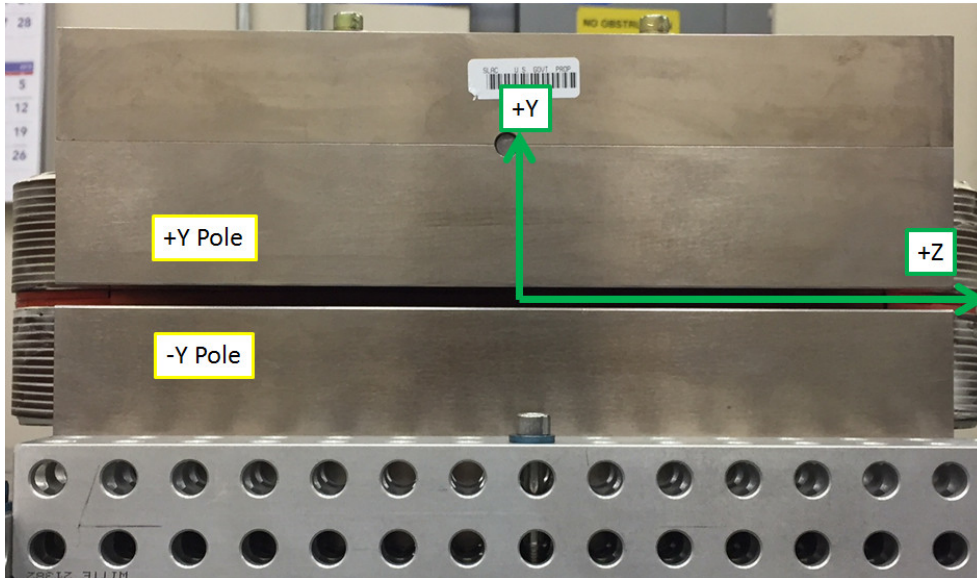
Tooling Ball	X Coord.	Y Coord.	Z Coord.
TB 1	4.9845	5.1344	-6.2501
TB 2	-0.0032	5.1337	-6.2525
TB 3	0.0000	5.1345	6.2496
TB 4	4.9851	5.1352	6.2475
TB A	4.9849	4.4469	-6.2503
TB B	-0.0025	4.4462	-6.2516
TB C	-0.0012	4.4470	6.2490
TB D	4.9850	4.4477	6.2480

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	0.0007	0.0007	0.0009	0.4302	0.4293	0.4308

Dimensions in Inch

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