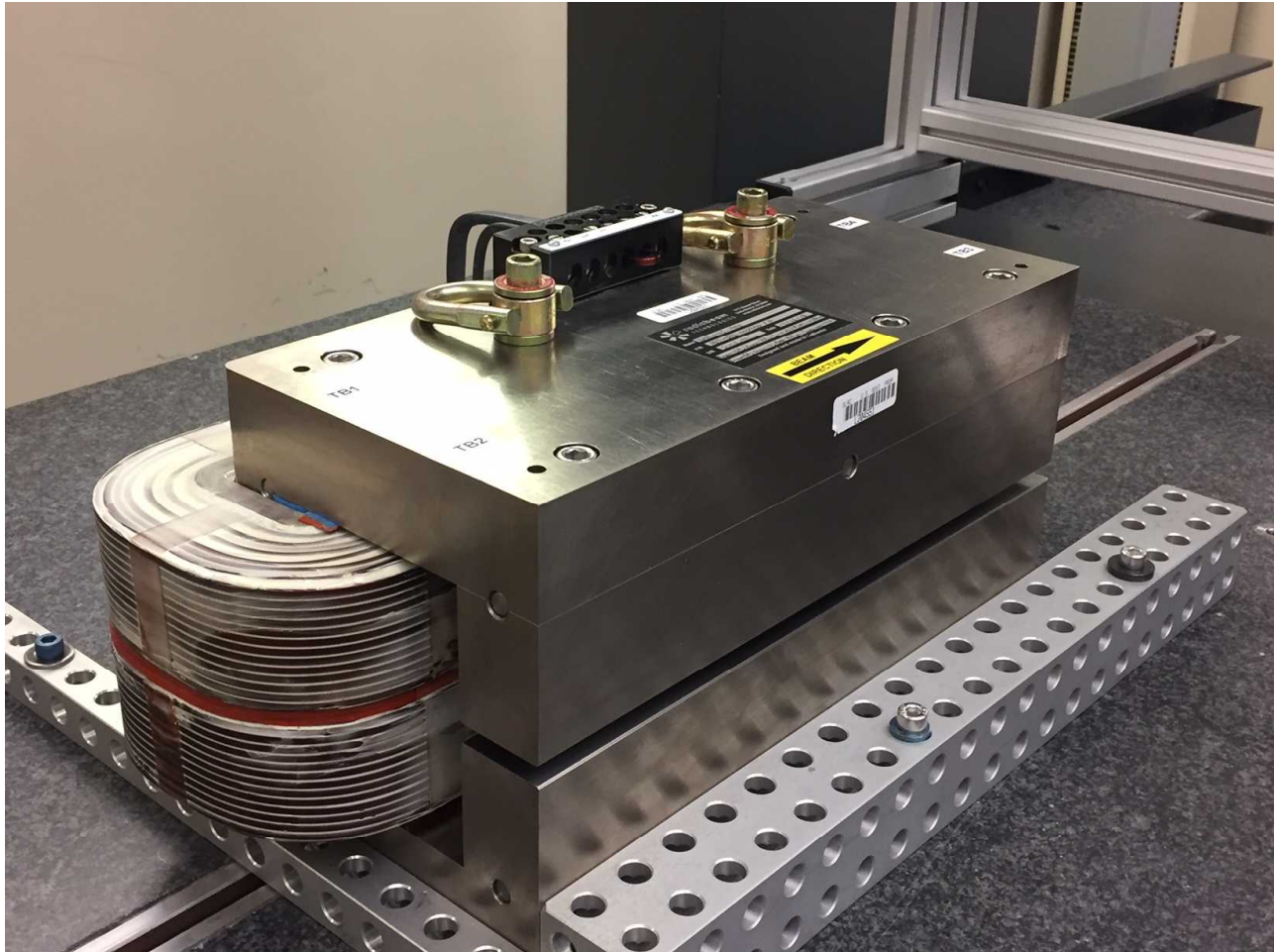


LCLS II Magnet Fiducialization Report XLEAP Dipole Magnet



Inspector : K. Caban
Engineer : J. Amann
Drawing No. : DRW-20171114-8425
Barcode # : 4551
Mfg. S/N : SLM3_02

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)

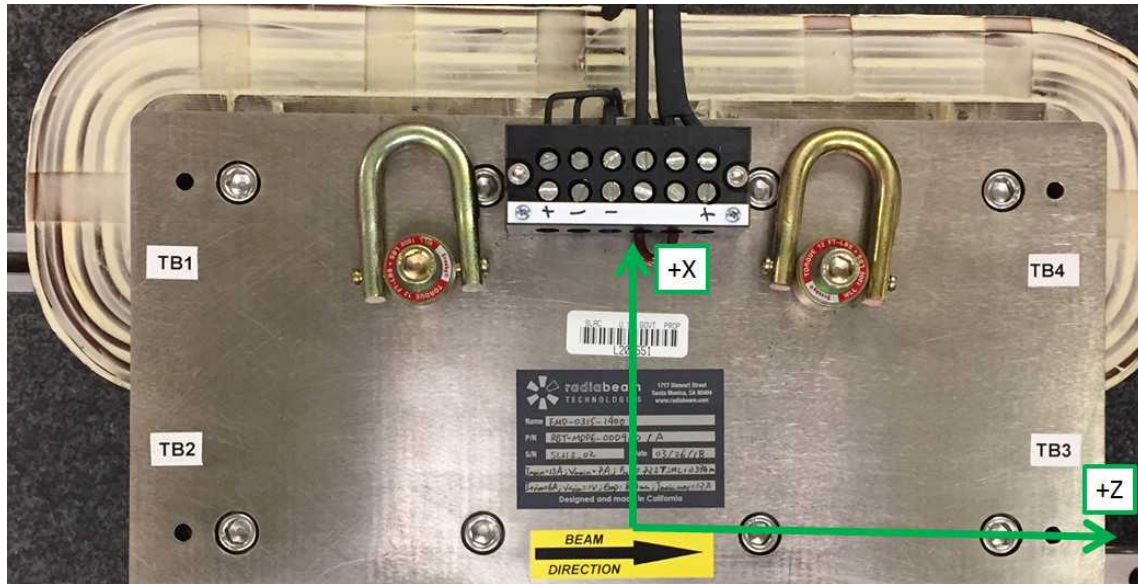
Y Origin - Symetry Plane between the Poles (.315 Gap Symetry)

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

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Tooling Ball Locations



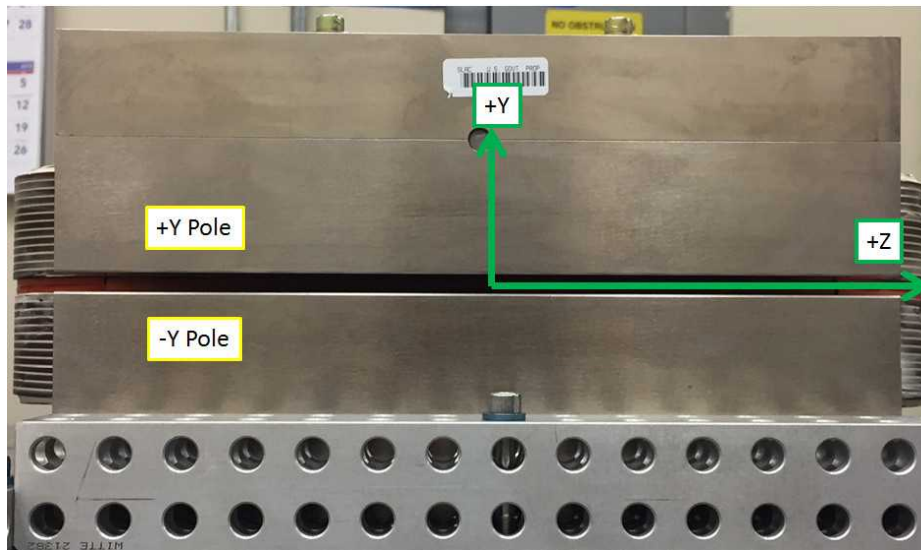
| Tooling Ball | X Coord. | Y Coord. | Z Coord. |
|--------------|----------|----------|----------|
| TB 1 | 4.9862 | 5.1388 | -6.2465 |
| TB 2 | 0.0006 | 5.1376 | -6.2483 |
| TB 3 | 0.0001 | 5.1375 | 6.2510 |
| TB 4 | 4.9864 | 5.1377 | 6.2506 |
| TB A | 4.9874 | 4.4503 | -6.2478 |
| TB B | 0.0003 | 4.4503 | -6.2484 |
| TB C | 0.0000 | 4.4504 | 6.2509 |
| TB D | 4.9870 | 4.4505 | 6.2512 |

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 |
|-----------|---------------|---------------|---------------|----------|----------|
| POLE DATA | 0.0005 | 0.0007 | 0.0009 | 0.3205 | 0.3200 |

Dimensions in Inch

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