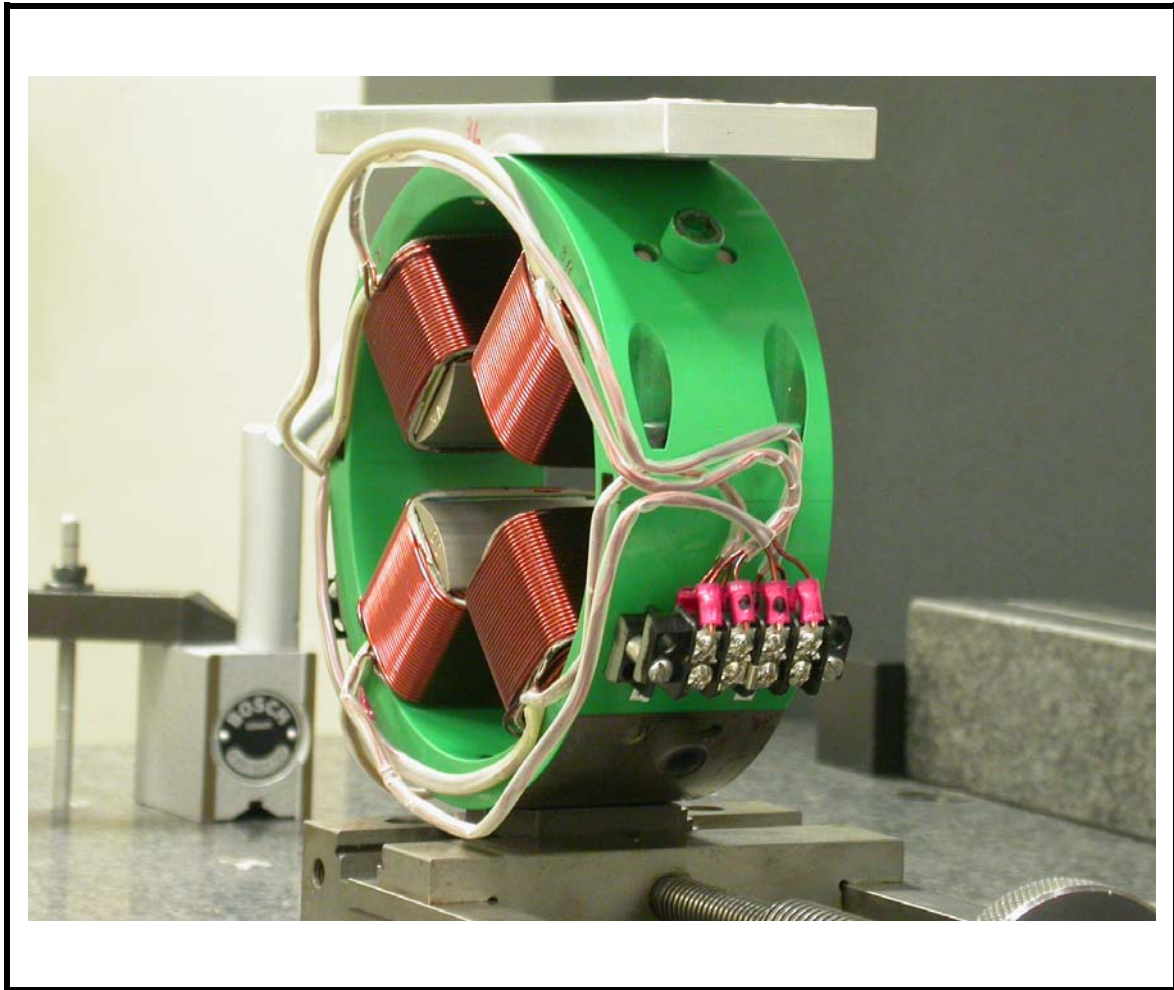


# LCLS Gun Spectrometer Quad Dipole Corrector Magnet FIDUCIALIZATION REPORT



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Responsible Engineer:	Roger Carr
Date:	Monday, May 15, 2006
Work Order/Charge No.:	20966-1 Task – 30
Serial Number	3

## Part Set-up – Coordinate System Set-up

### Planar Alignment

- Mid-Plane of the magnet

### Spatial Alignment

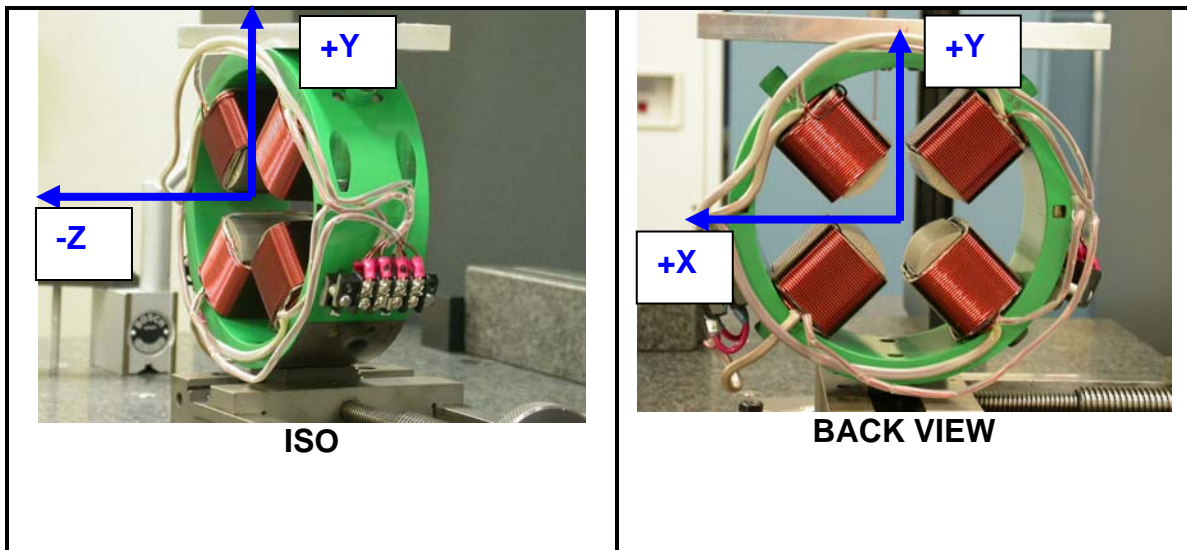
- A line on the top part of the magnet
  - +X is from TB 1 & 2 side to TB 3 & 4 Side

### “Z” Zero

- Mid-Plane of the magnet

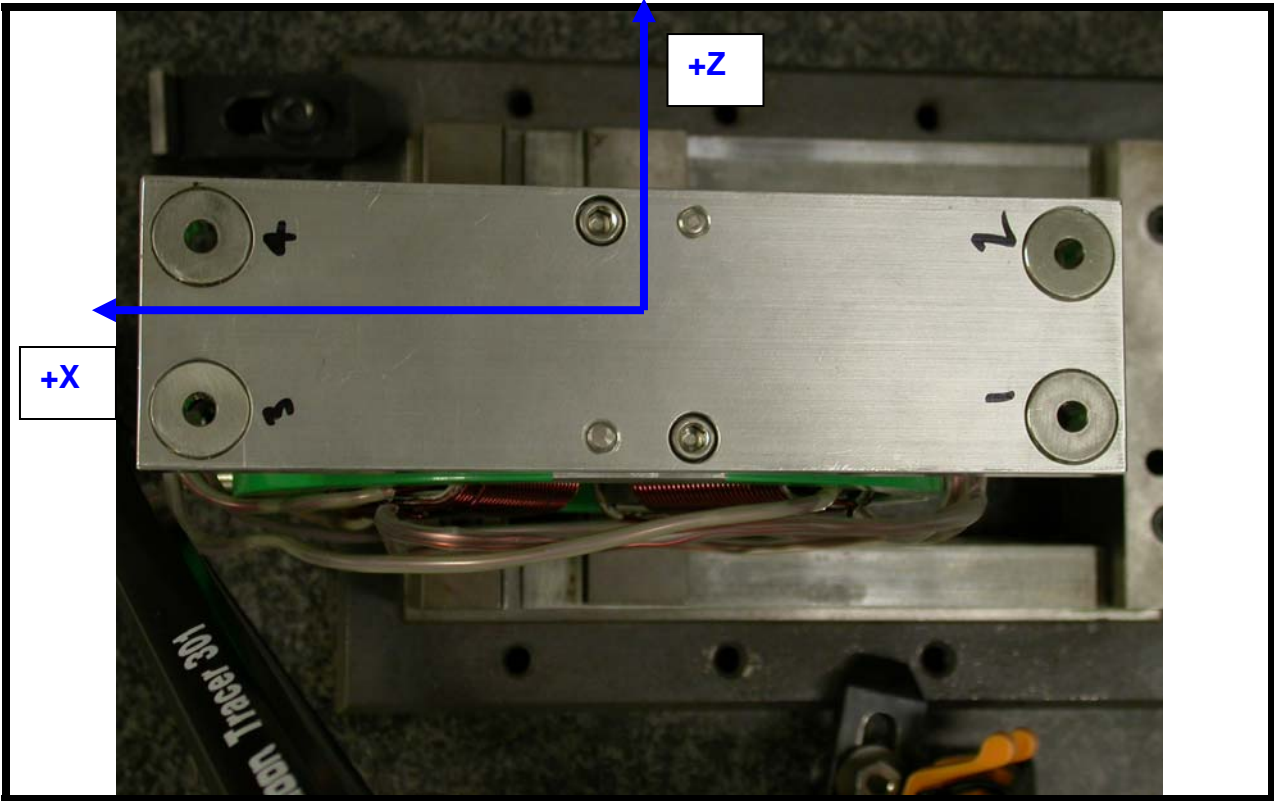
### “X” & “Y” Zero

- On both ends
  - Tangent point of each radii (4 on each end, 8 total).
    - Create a line between diagonal tangent points creates 2 lines.
      - Intersect the lines.
        - Creates a point on each end.
- Create a line of these 2 end points
  - This is the “X” & “Y” Zero, and Beamline or” Z” Axis.



### Tooling Ball Measurements/Locations

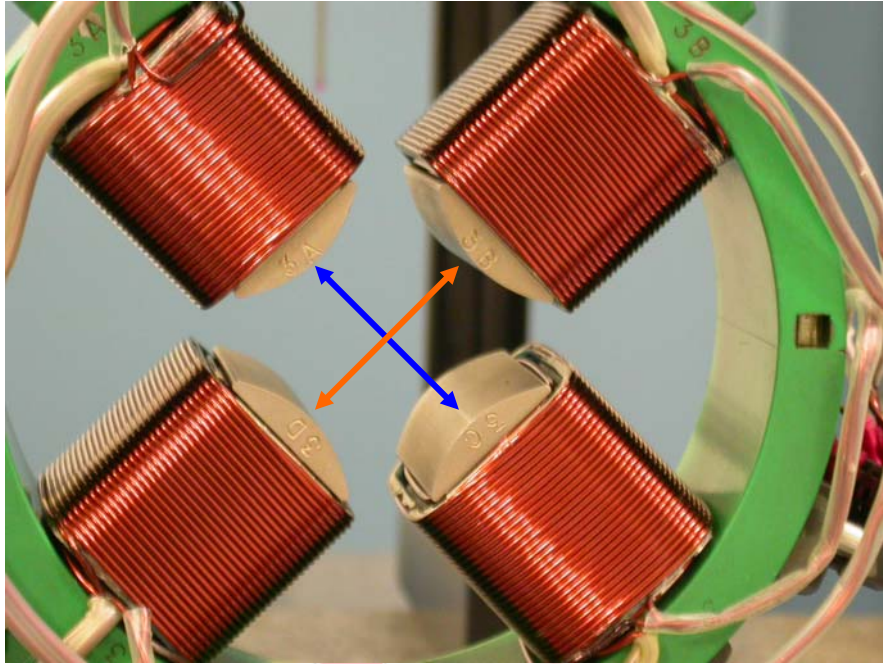
Top of magnet; view from "+Y"



Tooling Ball	FORM	DIAMETER	X	Y	Z
TB 1	0.00042	0.49810	-3.52193	4.82488	-0.67841
TB 2	0.00050	0.49691	-3.52356	4.82000	0.67395
TB 3	0.00067	0.49610	3.52892	4.80523	-0.67963
TB 4	0.00062	0.49665	3.52830	4.82393	0.67153

## Additional Requested Measurements

Distance from Tangent point of 4X poletips



A-C = 1.66566

B-D = 1.66590



Parallelism of 4X pole tips to the beamline

- A. 0.00043
- B. 0.00025
- C. 0.00023
- D. 0.00038