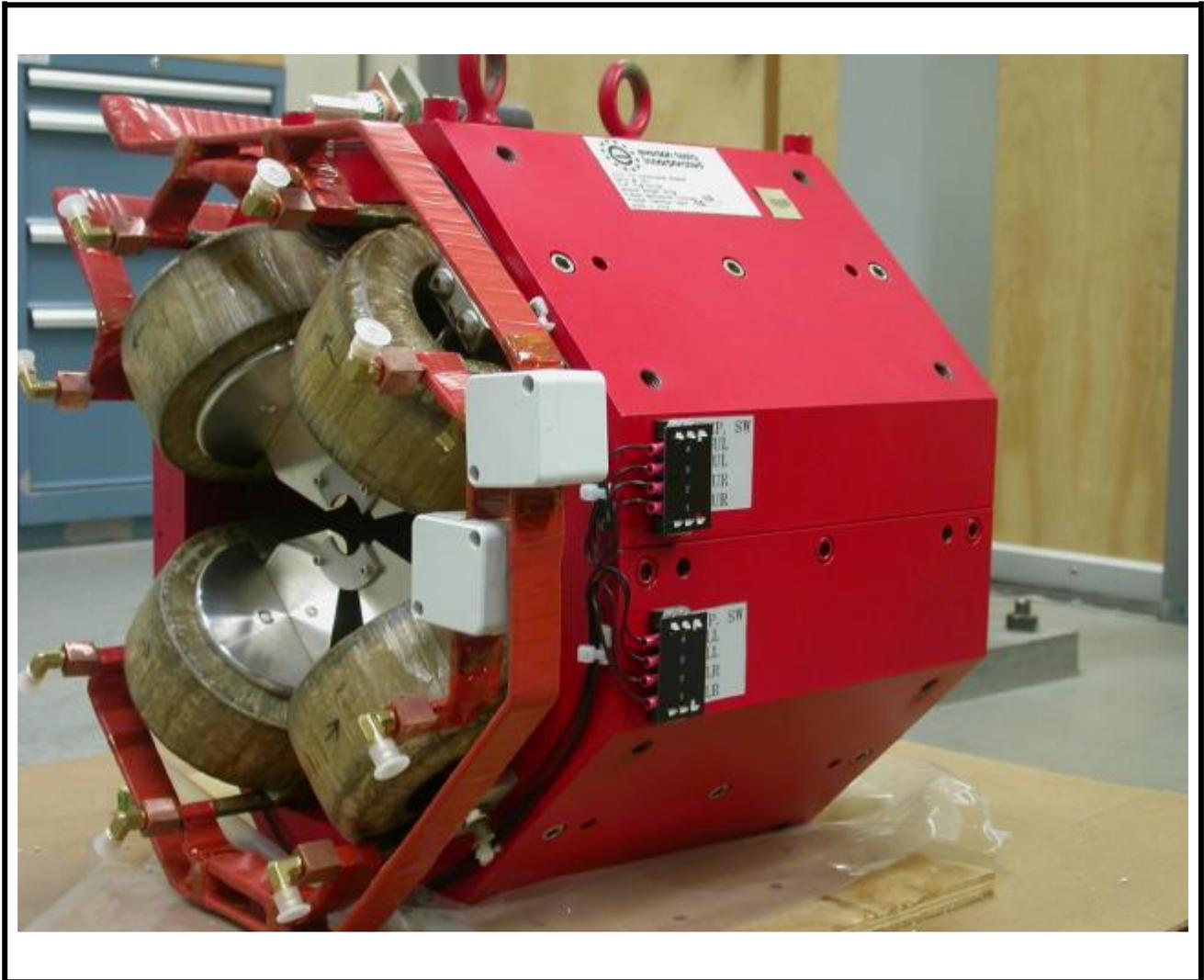


LCLS 'Q150kG' LTU QUADRUPOLE MAGNET FIDUCIALIZATION REPORT



Inspector: Keith Caban
Responsible Engineer: Carl Rago
Date: Monday, January 14, 2008
Work Order/Charge No.: 9242609
Serial Number: SLAC – 002884 / SN 013
URL of Fiducial Report: <\\Web002\www-group\met\Quality\FIDUCIAL REPORTS\LCLS LTU Q150kG QUADS\002884.pdf>

Part Set-up – Coordinate System Set-up

Spatial Alignment

- Geometric axis of the poles of the magnet.

Planar Alignment

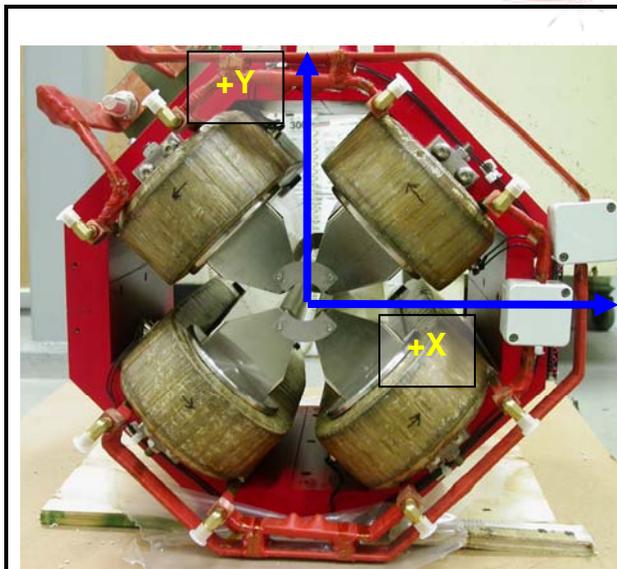
- Plane on top of magnet where tooling ball sockets are welded to.

“Z” Zero

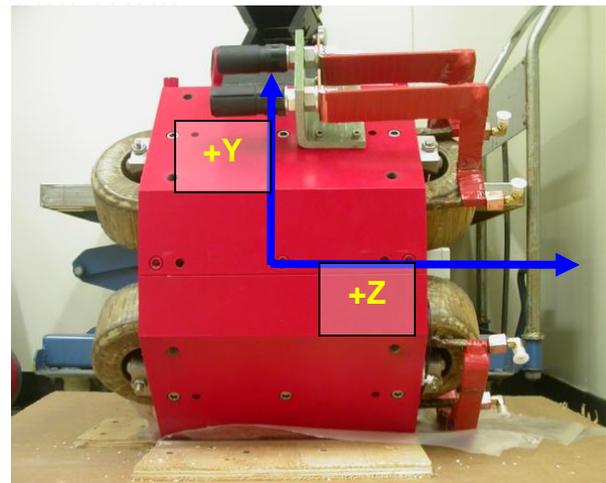
- Mid-plane of the magnet (middle of upstream and downstream ends).

“X” & “Y” Zero

- Geometric axis of the poles of the magnet.

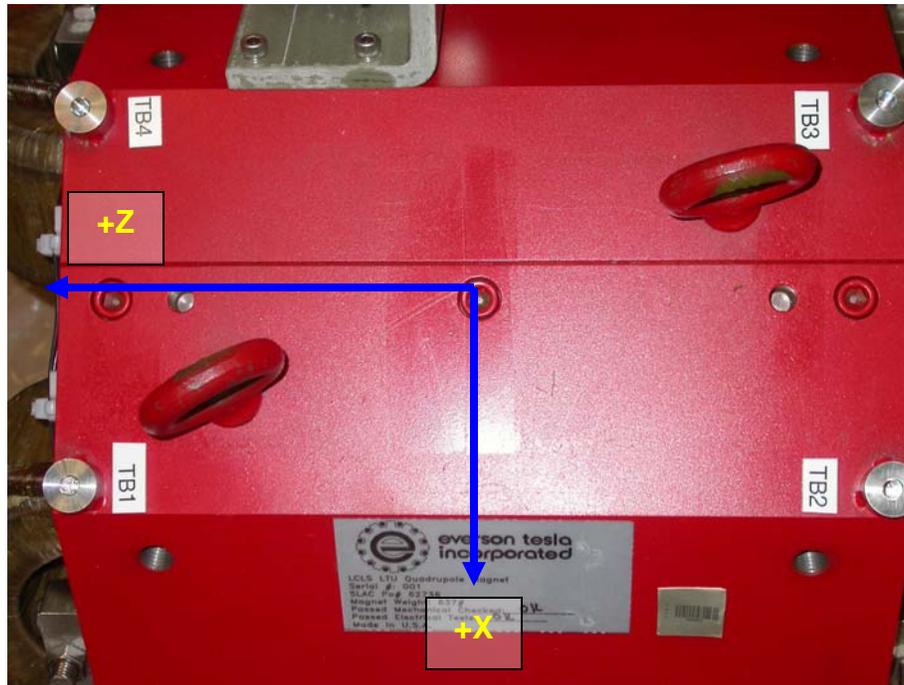


Front View



Side View

Tooling Ball Measurements/Locations

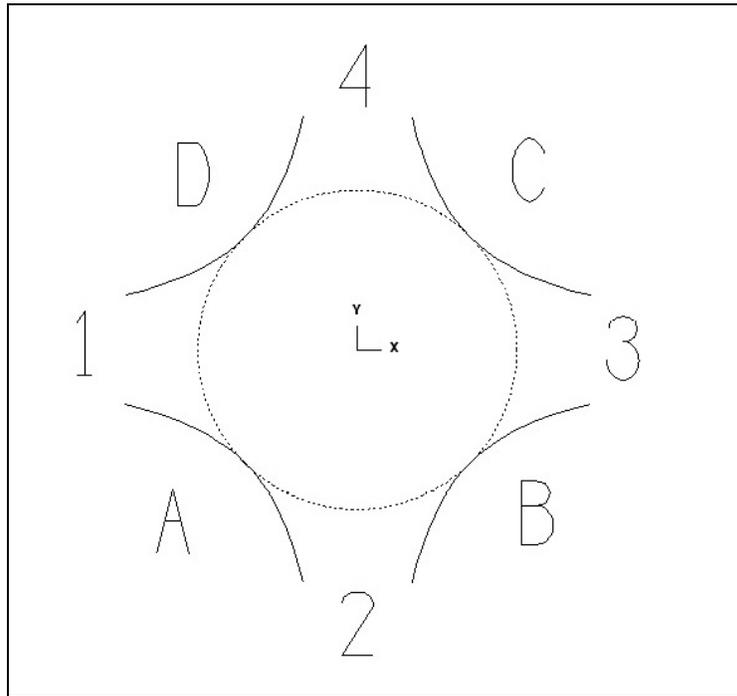


Tooling Ball Adapter Cylinder Projected 1" Offset to the Tooling Ball Adapter Plane

Tooling Ball	Form	Cyl. Dia.	X	Y	Z	⊥
Proj. TB 1	0.00015	0.24993	2.65333	10.21230	5.60647	0.00005
Proj. TB 2	0.00010	0.24999	2.65627	10.20818	-5.60955	0.00013
Proj. TB 3	0.00007	0.25002	-2.65266	10.20664	-5.61167	0.00092
Proj. TB 4	0.00014	0.25013	-2.66078	10.20919	5.60349	0.00011

Pole Data

*Data looking from Downstream End



Side	Pole Dist A-C	Pole Dist B-D	Gap 1	Gap 2	Gap 3	Gap 4
Downstream End (+Z)	1.26146	1.25932	0.43064	0.44007	0.43106	0.43409
Upstream End (-Z)	1.26165	1.25914	0.42998	0.44206	0.43366	0.43733