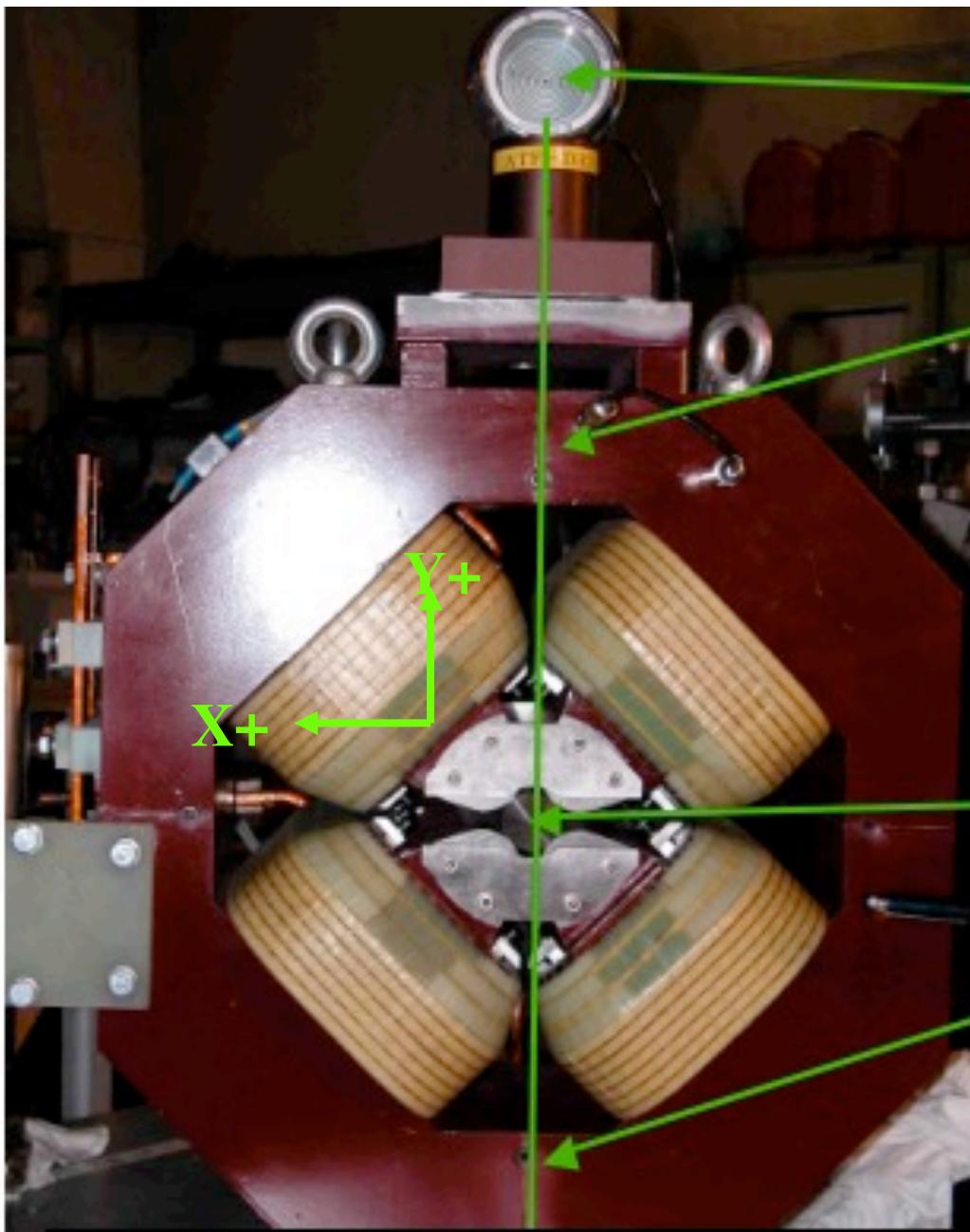


Magnetic center with respect to the mechanical center

- Large offset was found, especially in the horizontal direction.
 - Needs to be taken care of when aligning the magnets in the beam line, using the field measurement results.



(1) Alignment target

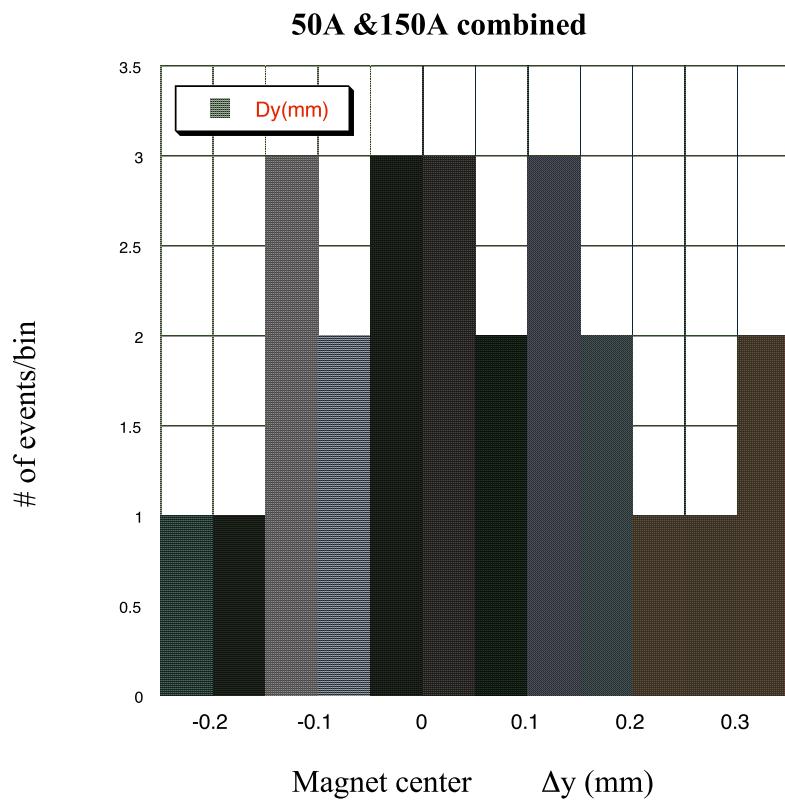
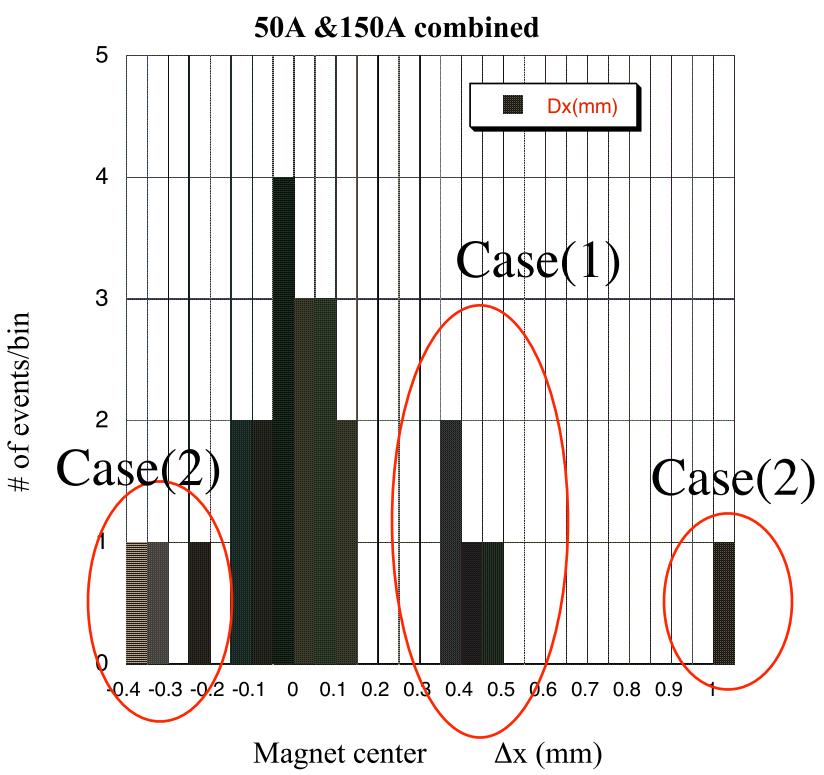
(2) 割芯 (上)

(3) Magnet mechanical center

(4) Magnet magnetic center

(5) 割芯 (下)

(1),(2),(3),(4) and (5) should be on a straight line....but

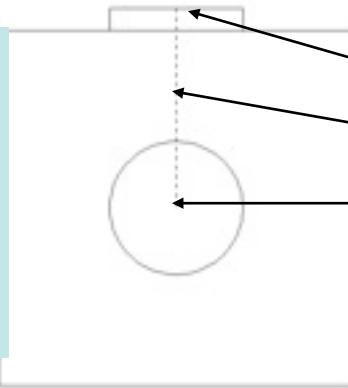


Problems with magnet & alignment plate

3 cases Effective length

Hall probe mapping by IHEP

Chen Wan, Sun Xianjing confirmed this with the alignment scope with us, with QEA08 magnet.



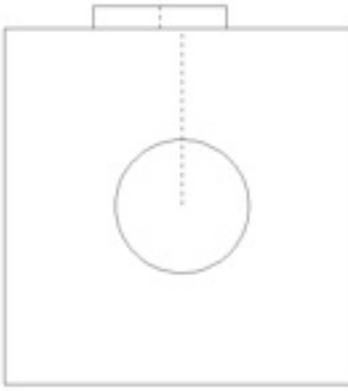
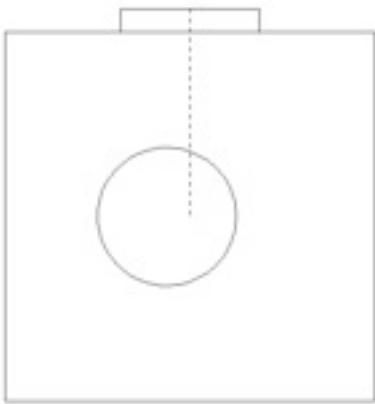
Correct case

Alignment base center

Split line between the cores

bore center

Must be aligned.



(1) Magnet bore is not aligned.
How could this happen??
EDM process???

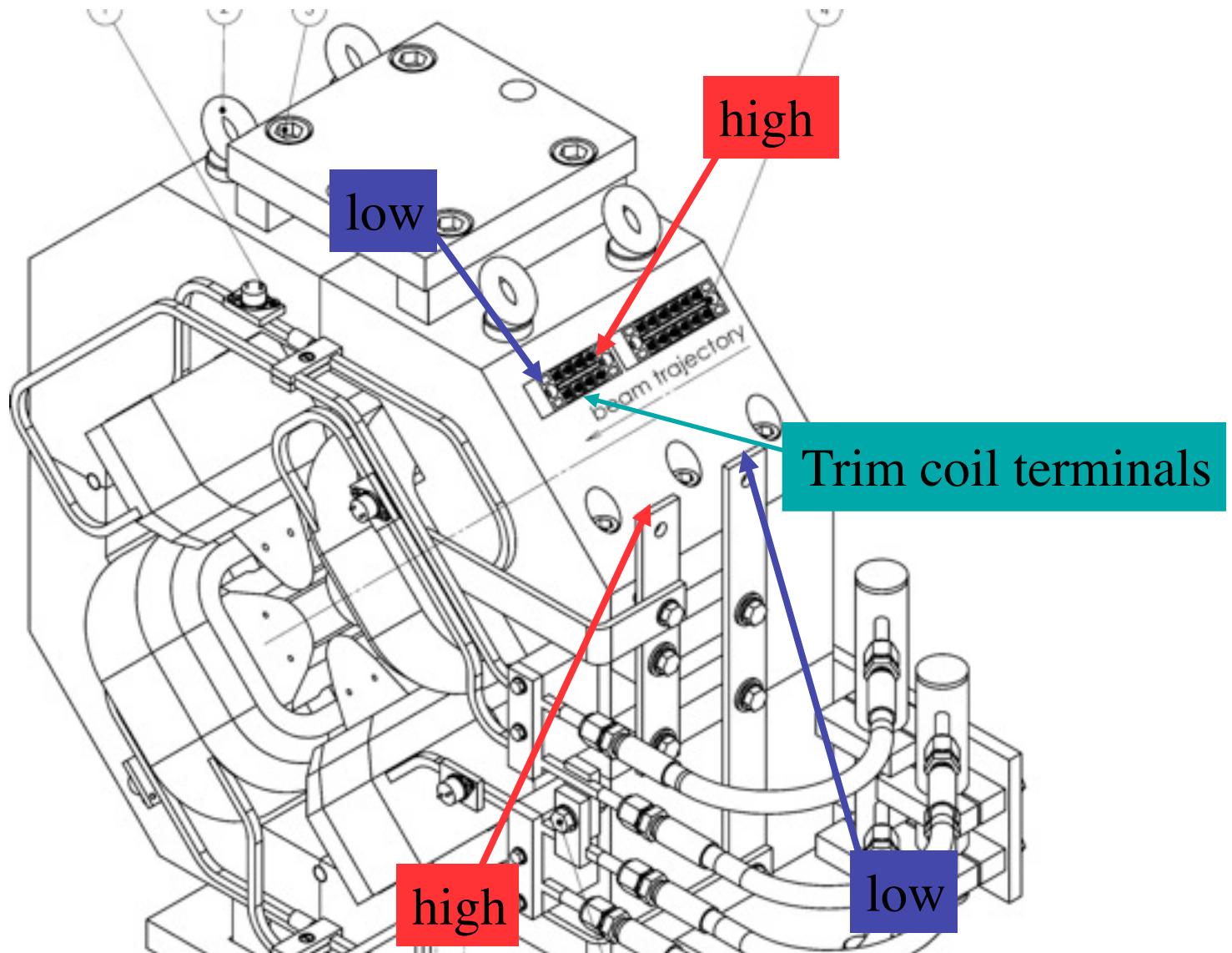
(2) Alignment base is
not aligned.

(3) (1)&(2) mixed.

date	Mag name	dx (mm)	dy(mm)
5/15/2006	QEA11	-0.030	0.123
5/16/2006	QEA12	-0.030	0.125
5/17/2006	QEA03	0.390	0.090
5/23/2006	QEA08	0.410	0.000
5/24/2006	QEA06	-0.060	0.320
5/25/2006	QEA09	0.020	0.070
5/26/2006	QEA05	0.046	0.290
5/29/2006	QEA10	-0.020	0.008
6/6/2006	QEA01	-0.360	-0.066
7/6/2006	QEA02	0.450	0.180
7/10/2006	QEA16	0.115	-0.210
7/13/2006	QEA15	-0.103	-0.122
7/31/2006	QEA07	-0.010	0.130
7/14/2006	QEA19	0.038	0.230
7/15/2006	QEA18	0.370	-0.124
7/15/2006	QEA22	-0.090	-0.001
7/19/2006	QEA14	-0.330	-0.035
7/21/2006	QEA17	-0.107	-0.042
7/21/2006	QEA24	0.075	-0.190
7/24/2006	QEA21	0.129	-0.129
7/25/2006	QEA20	1.040	0.156
7/25/2006	QEA23	-0.011	0.021
7/27/2006	QEA13	0.051	-0.098
7/27/2006	QEA25	-0.219	0.316

To ATF

Trim coil data (with QEA03 magnet)



This configuration gives the same polarity as the field generated by the main coils.