

Jefferson Lab Alignment Group

DATA TRANSMITTAL

TO: Dave Kashy

DATE: July 20, 2004

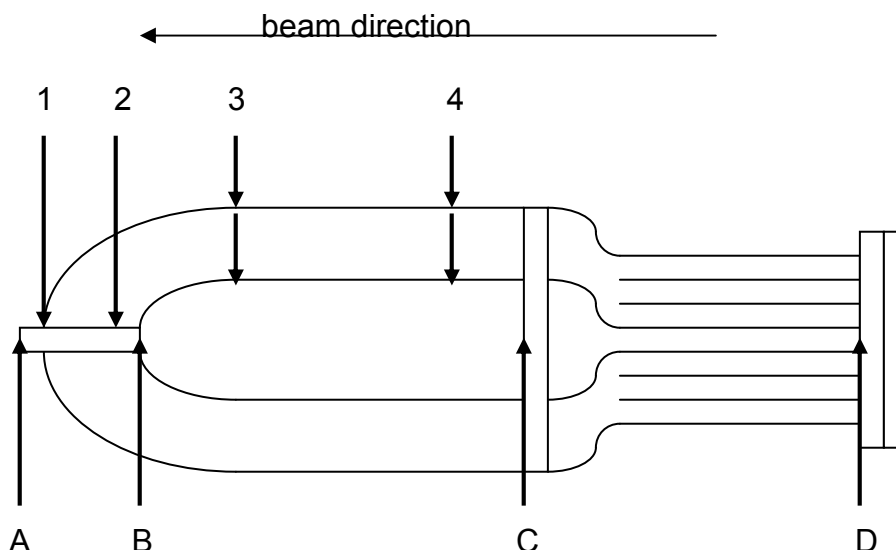
FROM: J. Dahlberg

Checked: # : B937

DETAILS:

Below are the results of the Hall B mini torus inspection performed during the week of July 12th. A right-handed coordinate system was established with +X to the beam left, and +Y above center. An average centerline for the Z-axis was defined using circles constructed at six locations along the inside and outside straight sections of the coils. The three inside coil locations toward the downstream end were double weighted.

An average of all six, coil centerline planes were used to set the roll. The planes were constructed using only the area downstream from location 3 shown below. In addition, a second coordinate system and set of data was evaluated with the Z axis centered on points A, and B to show the offsets of the coil centerline as set in the beam line. The values are in millimeters and decimal degrees.



COIL CENTERLINE USING CONSTRUCTED CIRCLES.

Loc.	Based on Z axis using coil centers.		Based on Z axis using A, and B.	
	X	Y	X	Y
1	0.0	0.0	+0.5	-2.7
2	-0.4	-0.8	+0.3	-2.7
3 (inside)	+0.8	+1.0	+1.7	-0.1
3 (outside)	-0.4	+0.2	+0.5	-1.0
4 (inside)	+0.6	-0.2	+1.8	-0.3
4 (outside)	-1.2	-0.7	0.0	-0.8

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DATA TRANSMITTAL (continued)

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DETAILS:

FLANGE AND LEAD SHIELDING LOCATION

Loc.	Based on Z axis using coil centers.		Based on Z axis using A, and B.	
	X	Y	X	Y
A (downstream nose)	-0.1	+3.8	0.0	0.0
B (upstream end Pb collar)	-0.7	+1.9	0.0	0.0
C (Al support flange)	-1.2	-0.5	0.1	+0.3
D (upstream flange)	+1.1	+5.1	+3.4	+9.4

ROTATION ANGLE OF THE COILS RELATIVE TO THE Y AXIS (CLOCKWISE LOOKING DOWNSTREAM).

Coil	Angle
0°	0.89
60 °beam right	59.89
120° beam right	118.73
180°	180.56
120° beam left	239.65
60 ° beam left	300.29