



Jefferson Lab Alignment Group

Data Transmittal

TO: D. Kashy, C. Luongo, O. Pastor

DATE: 28 Apr 2015

FROM: Kelly Tremblay

Checked:

: B1627

DETAILS:

data : step2a\hallb\torus12\150427A

Coils B, C and D were checked in Hall B on April 27th.

Coil D was installed approximately horizontal (270° clockwise looking downstream), coil C was at 210° and coil B was at 150°. The two survey ball holes on the outer edge away from the hub were used to determine the angles formed between the coils. The data below marked 'US' and 'DS' are the upstream and downstream prisms.

The ideal coordinates based on drawing B00000-04-01-1101 rev D and the found locations (note offset 5/16" due to the survey prism used) are:

	Ideal			Found			deltas		
	X [mm]	Y [mm]	Z [mm]	X [mm]	Y [mm]	Z [mm]	dx [mm]	dy [mm]	dz [mm]
Coil D - US	3207.20	0.00	-506.95	3206.93	-6.25	-504.70	-0.27	-6.25	2.25
Coil D - DS	4212.84	0.00	878.25	4212.52	-7.14	880.59	-0.32	-7.14	2.34
Coil C - US	1603.62	-2777.52	-506.95	1596.59	-2781.98	-503.18	-7.03	-4.46	3.77
Coil C - DS	2106.42	-3648.43	878.25	2100.03	-3651.78	882.66	-6.39	-3.35	4.41
Coil B - US	-1603.62	-2777.52	-506.95	-1610.11	-2774.50	-503.70	-6.49	3.02	3.25
Coil B - DS	-2106.42	-3648.43	878.25	-2113.88	-3644.45	881.72	-7.46	3.98	3.47

Angles from the hub to the prism locations:

Angles from Hub (degrees)			Angle Between Coils (degrees)				
	Ideal	Found			Ideal	Found	
Coil D - US	0.0000	269.8876	D to C	US	60.0000	60.0286	-0.0286
Coil D - DS	0.0000	269.8897		DS	60.0000	59.9871	0.0129
Coil C - US	210.0000	209.8591	C to B	US	60.0000	59.9786	0.0214
Coil C - DS	210.0000	209.9027		DS	60.0000	60.0036	-0.0036
Coil B - US	150.0000	149.8804	D To B	US	120.0000	120.0072	-0.0072
Coil B - DS	150.0000	149.8990		DS	120.0000	119.9907	0.0093

Distances between prism locations:

Distances between survey prisms (mm)				
		ideal	Found	Delta
Coil D-C	US	3207.2	3209.0	1.8
	DS	4212.8	4212.6	-0.2
Coil C - D	US	3207.2	3206.7	-0.5
	DS	4212.8	4213.9	1.1

Hub Centers:

Hub Centers (mm)			
	x	y	z
US	-0.6	0.7	452
DS	-0.7	2.0	2502