Jefferson Lab Alignment Group

Data Transmittal

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DETAILS: DATA: Inspection\HallA\He3compass\090105a,090105b

Below are the results of the Hall A He3 coil field mapping survey carried out on Jan 5, 2009. A gravity based coordinate system is centered on the ideal Hall A target position with a +X to the beam left, a +Z downstream, and a +Y up. The horizontal compass coordinates are to the top of the iron compass rod. Values are in millimeters and degrees. A + yaw angle is counter clockwise looking from above, a + roll angle is clockwise looking from upstream. **Note**: Shielding obstructed the view on some horizontal compass measurements and therefore, a common center point was used to calculate the angle.

Vertical compass measurements.

LOCATION	Z	X	Y	ROLL	YAW
90 LASER1	42.99	2754.38	63.26	+1.248	-0.909
90 COMPASS1	-0.69	-0.08	3.24		
90 LASER2	-157.60	2760.47	62.52	+1.238	-0.993
90 COMPASS2	-205.46	-0.34	2.84		

Horizontal compass measurements.

LOCATION	Z	X	Y	YAW
270 BL	-1.29	231.28	-2.67	
270 BR	-6.84	-226.05	-1.73	
270 CL	-4.07	2.62	-2.21	-0.695
225 US (Used 270 CL)	-166.40	-157.19	1.79	-0.450
180 US	-231.37	3.89	1.82	
180 DS	225.33	0.49	3.24	
180 CL	-3.02	2.19	2.53	-0.426
135 US (Used 90 CL)	-161.54	158.94	1.53	-0.246
90 BL	-2.07	224.97	-0.63	
90 BR	1.10	-231.96	1.76	
90 CL	-0.49	-3.50	0.57	+0.398
45 US (Used 0 CL)	-161.08	-164.33	0.83	+0.449
0 US	-229.13	-4.95	2.06	
0 DS	227.69	2.08	2.22	
0 CL	-0.72	-1.43	2.14	+0.882
315 US (Used 0 CL)	-162.81	159.67	0.56	+0.176
270 BL rep	-0.76	227.37	-0.01	
270 BR rep	-5.70	-229.55	2.43	
270 CL rep	-3.23	-1.09	1.21	-0.619
225 US rep (Used 270 CL rep)	-166.54	-160.83	1.94	-0.634