



Jefferson Lab Alignment Group

Data Transmittal

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FROM: J. Dahlberg

Checked:

: A1185

DETAILS:

DATA: Step2B\BSY\BSY9A\080929A, 081006A

Below are the results of the recent survey performed on the Hall A Compton detector and chicane dipoles. The detector positions are derived from the fiducial data and are to the center of the bottom of the frame on the upstream face when driven to the lower limit switch. A +X is to the beam left, a +Z is downstream, and a +Y is up. A + yaw is counter clockwise looking from above, a + pitch is ccw looking from the beam right, and a + roll is cw looking downstream. Values are based on the ideal position of the detector chamber in the straight ahead beam line. Values are in millimeters and degrees.

INITIAL ALIGNMENT WITH CHAMBER UNDER VACUUM

LOCATION	Z	X	Y	YAW	PITCH	ROLL
Vacuum chamber	-9.05	3.72	3.54	-1.303	0.071	0.164
Detector	32.61	3.74	-54.74	-1.478	2.976	-0.033
Det. at upper limit.			74.98			

DETECTOR CHAMBER AT ATMOSPHERE

LOCATION	Z	X	Y	YAW	PITCH	ROLL
Vacuum chamber	-8.09	3.79	3.60	-1.313	0.131	0.180
Detector	33.51	3.81	-54.71	-1.473	2.991	-0.023
Det. at upper limit.			75.01			

MOTOR DRIVE CALIBRATION AT ATMOSPHERE

LOCATION	Z	X	Y
Measure #1	50.40	2.34	398.93
#2	50.30	2.29	415.59
#3	50.09	2.26	438.10
#4	50.28	2.35	416.14
#5	50.38	2.35	401.17

CHICANE DIPOLE

	Z	X	Y
MC1P01	0.04	0.05	-0.20
MC1P02	-0.16	0.17	-0.58
MC1P03	-0.13	0.70	-0.91
MC1P04	0.78	-0.01	-0.29