



Jefferson Lab Alignment Group

Data Transmittal

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DATE: 14 Jan 2009

FROM: J. Dahlberg

Checked:

: C1213

DETAILS:

DATA: STEP2B\HALLC\Target\090113a
Inspection\HallC\polartarget\090109a, b

Below are the results from the survey carried out on the Hall C 4.7 GeV polarized target chamber rotated at 80 degrees. Values are relative to the ideal rotation angle of 80 degrees off straight ahead beam with a +X to the beam left, a +Z downstream, and a +Y up. A + yaw is counter clockwise looking from above, a + pitch is ccw looking from the beam right, and a + roll is cw looking from upstream. Values are in millimeters and degrees.

LOCATION	Z	X	Y	YAW	PITCH	ROLL
Helmholz coil	-0.4	0.3	-0.5	-0.017	-0.010	-0.028

NOTE: As requested, an inspection of the target tube relative to the coil center line was carried out prior to installation. This coordinate system was established using the geometric centers of the upstream and downstream apertures of the coil (not rotated 80 degrees). The offset of the target was found to be 0.6 mm to the beam left and 1.3 mm downstream from the coil center. During this survey, four fiducial points were checked and differences of up to 1.8 millimeters were seen from ideal. Therefore, without re-fiducializing the target chamber, the location stated above has an uncertainty of roughly 2 millimeters.