



Jefferson Lab Alignment Group

Data Transmittal

TO: T. Whitlatch, S. Spiegel

DATE: 11/09/2023

FROM: Elena Balan

Checked: CG

: D2090

DETAILS:

M:\align\DATA\Step2B\HALLD\CDC\230828A\processed
M:\align\DATA\Step2B\HALLD\FDC\231107A

The Hall D Forward Drift Chamber and Central Drift Chamber were re-surveyed. For the beam following coordinates, positive dx is to the beam left from zero position looking downstream; negative dy is the amount lower than the beamline; positive dz is the amount downstream from the zero position. A + yaw angle is counterclockwise about the Y axis, looking from above, a + pitch is counterclockwise about X axis from the beam right, and a + roll is clockwise around Z axis looking from upstream.

HDFDC represents the position of the entire assembly at the US face, it is not referring to the first centerline. HDFDC_CL1 has no information since we were able to measure only two points for this package.

Looking through old surveys (9/18/2014), we found that the FDC moved 1mm downstream when ramped to 1000 Amps. The FDC moved 1mm upstream when brought down to 0 Amps from 1000 Amps.

Please disregard the report D2073 sent originally.

	CEBAF Coordinates [meters]			Beam Following [mm]			Angular data [degrees]			Std. Dev [mm]
	X	Y	Z	dx	dy	dz	yaw	pitch	roll	
HD_CDC	80.59999	104.69915	399.06475	-0.01	-0.85	4.72	0.0140	-0.0040	0.0556	0.198
HDFDC	80.59915	104.69920	399.88805	-0.85	-0.80	4.50	0.0375	0.0192	-0.0126	0.180
HDFDC_CL2	80.59937	104.69930	400.54597	-0.63	-0.70	4.53	0.0458	-0.0501	-0.0312	0.235
HDFDC_CL3	80.59995	104.69970	401.13168	-0.05	-0.31	4.35	0.0309	-0.0456	-0.0106	0.059
HDFDC_CL4	80.60030	104.69959	401.51862	0.30	-0.41	4.54	0.0060	0.1169	0.0083	0.068

