Jefferson Lab Alignment Group

Data Transmittal

TO: M. Mestayer, B. Miller		**DATE:** 21 Dec 2016
FROM: Kelly Tremblay	**Checked:**	**# :** B1759

DETAILS:

data : step2b\hallb : region 3\161213a : region 2\161115a&160914a : torus12\160808a & 160824a : calcs\hallb\12g torus det.

The three regions of the 12 GeV Torus drift chambers were set and aligned during the latter half of 2016. The table below shows the transformation of each drift chamber relative to the 12 GeV target. The details for the transformations also appears at the end of the document.

Units are millimeters; Angles are degrees. Rotations are about each axis using the right hand rule.

Region 1 Drift Chambers						
Sector	**dX [mm]**	**dY [mm]**	**dZ [mm]**	**Euler X º**	**Euler Y º**	**Euler Z º**
r1.s1	-0.15	0.12	0.52	0.0002	0.0099	-0.0189
r1.s2	-0.40	0.19	-0.28	-0.0068	0.0021	59.967
r1.s3	-0.23	-0.03	0.13	-0.0009	-0.0016	119.9923
r1.s4	0.27	0.73	0.11	0.0124	-0.0039	-179.9928
r1.s5	0.75	0.20	0.44	0.0058	-0.0101	-120.0093
r1.s6	0.12	0.58	0.31	0.0107	0.0024	-60.0018
Region 2 Drift Chambers						
Sector	dX [mm]	dY [mm]	dZ [mm]	Euler X º	Euler Y º	Euler Z º
r2.s1	-0.46	0.14	0.50	-0.0089	0.0036	-0.0139
r2.s1	-0.11	-0.54	0.14	-0.0055	0.0032	60.0011
r2.s3	-0.09	-0.19	0.28	-0.0059	0.0025	120.0048
r2.s4	-0.28	-0.40	-0.16	-0.0107	0.0068	179.9990
r2.s5	0.61	-0.08	0.25	0.0035	-0.0067	-120.0043
r2.s6	0.12	-0.17	0.00	-0.0018	0.0015	-60.0044
Region 3 Drift Chambers						
Sector	dX [mm]	dY [mm]	dZ [mm]	Euler X º	Euler Y º	Euler Z º
r3.s1	0.14	-0.26	-0.09	0.0008	0.0003	0.0074
r3.s2	0.15	0	0.04	-0.0027	0.001	60.0032
r3.s3	0.15	0.47	-0.19	-0.0007	-0.0011	120.0079
r3.s4	0.27	-0.12	0.25	-0.0013	-0.0007	179.9995
r3.s5	-0.44	-0.37	-0.18	-0.0008	0.0035	-120.0017
r3.s6	0.38	-0.17	-0.29	0.0007	-0.0037	-60.0007