

Jefferson Lab Alignment Group

DATA TRANSMITTAL

TO: Dave Kashy

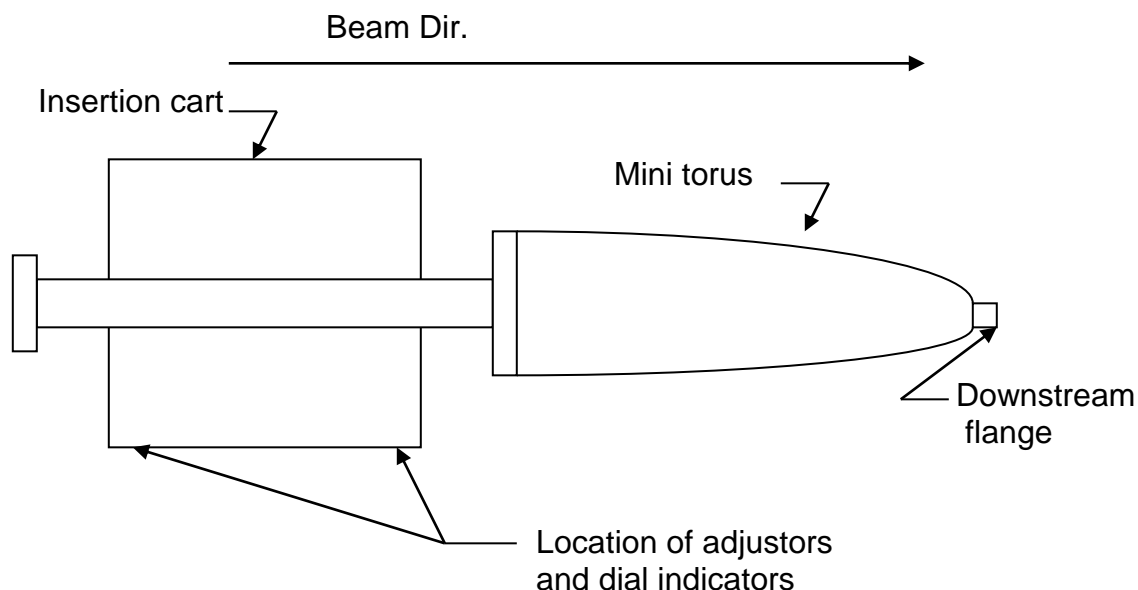
DATE: 8 June, 2000

FROM: Richard Schwartz, Chris Gould

Checked: # B609

DETAILS:

Attached are the results of the Hall B insertion cart lateral translation survey. Horizontal (X) movements of the cart were controlled using dial gauges at the upstream and downstream lateral adjusters. As illustrated below, the same points on the cart along with the downstream flange of the mini torus were monitored with theodolites. Listed are the three sets of coordinates generated from the theodolite survey along with the dial gauge readings (converted to millimeters). A third dial gauge used to monitor Z motion on the cart indicated fluctuations of less than 0.07mm and therefore, are not listed. The downstream adjusters were used to translate the cart while the upstream adjusters were left "finger tight" to prevent strain in the system. Note that although two separate surveys were performed and readings were taken when the cart was positioned back to "zero", the magnitude of tension on the upstream adjusters may effect the results. No tests were performed to determine this. Consequently, there may not be enough data to determine the repeatability of this adjustment technique. The position of the downstream flange differed as much as 0.67mm between the two surveys. A right handed coordinate system was used with + X to the beam left, + Y up, and + Z downstream.



DIAL GUAGE		UPSTREAM ADJUSTER		DOWNSTREAM ADJUSTER			DOWNSTREAM		
INDICATOR (mm)	dZ (mm)	dX (mm)	dY (mm)	dZ (mm)	dX (mm)	dY (mm)	dZ (mm)	dX (mm)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1.27 B.L	0.86	0.08	-0.02	0.91	1.22	0.01	0.52	4.96	
2.54 B.L.	1.83	0.08	-0.02	1.84	2.56	-0.02	0.16	11.14	
0.00	0.00	0.11	0.01	0.05	0.04	-0.02	-0.15	0.51	
1.27 B.R.	-0.96	0.09	-0.01	-0.96	-1.27	-0.02	0.43	-5.99	
2.54 B.R.	-1.90	0.13	-0.04	-1.89	-2.52	-0.01	0.51	-12.02	
0.00	-0.05	-0.08	0.00	0.01	-0.05	-0.03	0.33	-0.28	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1.27 B.L.	0.86	-0.09	0.00	0.90	1.17	0.05	-0.06	5.55	
2.54 B.L.	1.80	-0.20	-0.01	1.82	2.50	0.07	-0.22	11.26	
0.00	-0.03	-0.20	-0.02	-0.05	-0.17	-0.04	-0.08	-0.11	
1.27 B.R.	-0.98	-0.19	-0.01	-0.93	-1.40	-0.08	0.06	-6.22	
2.54 B.R.	-1.89	-0.18	-0.04	-1.86	-2.79	-0.05	-0.05	-11.36	
0.00	-0.08	-0.18	0.00	-0.06	-0.26	-0.05	0.05	0.08	