



Jefferson Lab Alignment Group

Data Transmittal

TO: T. Whitlatch

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Checked:

: D1951

DETAILS: :

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The data below shows the location and set positions for various equipment in Hall D prior to the fall 2019 run.

For the local coordinates, positive dx is to the beam left from zero position looking downstream; negative -y is the amount lower than the beamline; positive z is amount downstream from the zero position.

	Cebaf Coordinates [meters]			Beam Following [mm]			Angular data [degrees]		
	X[m]	y[m]	Z[m]	dx	dy	dz	yaw	pit	roll
CalComp									
HOME	80.88824	104.69922	410.90034	288.24	-0.78	-39.25	-0.13722	-0.05157	-0.07019
ZERO	80.60000	104.69986	410.89935	0.00	-0.14	-40.24	-0.07850	0.01117	-0.04039
ZERO-REPO	80.60016	104.70011	410.89989	0.16	0.11	-39.70	-0.08566	-0.08079	-0.04383
ZERO-REP1	80.60015	104.69995	410.89997	0.15	-0.05	-39.62	-0.06847	-0.09998	-0.01891
ZERO-REP2	80.59999	104.69997	410.89986	-0.01	-0.03	-39.73	-0.08566	-0.07334	-0.04011
DIRC Mirror Box									
Beam Left	83.62248	105.51273	403.95897	3.88	0.30	15.51	-0.1023	-0.1834	-0.0444
Ideal mb left	83.61860	105.51243	403.94346						
Beam Right-T0	77.58717	104.39610	403.94306	5.770	-6.445	-0.400	-0.18936	-0.22489	0.04841
Beam Right-T1	77.58723	104.39604	403.94303	5.830	-6.505	-0.430	-0.20168	-0.22546	0.04354
Ideal MB Right	77.5814	104.4026	403.94356						
DIRC Boxes									
DIRC3	80.60138	104.99903	403.98419	1.38	2.51	1.48	-0.08365	-0.15384	-0.00773
DIRC4	80.60146	105.51401	403.98541	1.46	2.64	2.70	-0.09568	-0.18363	-0.01461
Random									
HDFCAL	80.60508	104.70010	404.38481	5.08	0.10	-1.99	-0.04584	0.03524	-0.01490
HDFTOF	80.60334	104.70477	404.18644	3.34	4.77	-3.36	-0.04154	0.04498	-0.13837
HDTARG	80.59994	104.70004	398.78999	-0.06	0.04	0.16	0.00029	0.00143	-0.01404
MCOAD01	80.70155	104.69984	374.48511	101.55	-0.16	-0.22	0.02464	0.00859	-0.07391
HDTAC	80.60000	104.70000	414.38200						
USCENTER	80.59968	104.69994	414.37114						

The Calcomp detector was measured in the 'home' position then inserted in the beam at the 'zero' position. The detector was moved and reinserted 3 times to check repeatability.

The beam left and right DIRC mirror boxes were measured with the right box repeated from two tracker locations (T0 / T!). DIRC boxes 3 and 4 were also measured. The random data show in order the FCAL detector, Forward Time of Flights (FTOF) detector, the target, the first Collimator in the alcove, the Start Counter (TAQ) as-found