



Jefferson Lab Alignment Group

Data Transmittal

TO: T. Whitlatch, W. Crahen, L. Pentchev

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FROM: J. Dahlberg

Checked: SEH

: D1518

DETAILS:

Below are the results from the FDC package pre-alignment carried out on July 23, 2013. A right handed coordinate system (in inches) was established using the frame rails as a reference. The top of the rails established the XZ plane at 0.147" above the origin center. The beam right rail set the rotation about the Y axis at -24.882" to the right of the origin. A +X is to the left, a +Z is downstream, and a +Y is up. A +pitch is clockwise looking from the beam right side, and a + yaw is clockwise looking from above.

DETECTOR 1(UPSTREAM)	PITCH: 0.0583 deg.	YAW: 0.0034 deg.					
FIDUCIAL	X	Y	Z	IDEAL X	IDEAL Y	DIFF X	DIFF Y
1TBR	-12.537	16.319	-0.915	-12.523	16.320	-0.014	-0.001
1BBR	-7.861	-18.996	-0.936	-7.872	-19.005	0.011	0.009
1TBL	7.851	19.008	-0.913	7.872	19.005	-0.021	0.003
1BBL	16.325	-12.513	-0.926	16.320	-12.523	0.005	0.010

DETECTOR 2	PITCH: 0.0372 deg.	YAW: 0.0172 deg.					
FIDUCIAL	X	Y	Z	IDEAL X	IDEAL Y	DIFF X	DIFF Y
2TBR	-12.527	16.335	22.124	-12.523	16.320	-0.004	0.015
2BBR	-7.888	-18.994	22.121	-7.872	-19.005	-0.016	0.011
2TBL	7.868	19.011	22.147	7.872	19.005	-0.004	0.006
2BBL	16.313	-12.523	22.140	16.320	-12.523	-0.007	0.000

DETECTOR 3	PITCH: 0.0278 deg.	YAW: -0.0023 deg.					
FIDUCIAL	X	Y	Z	IDEAL X	IDEAL Y	DIFF X	DIFF Y
3TBR	-12.529	16.317	45.217	-12.523	16.320	-0.006	-0.003
3BBR	-7.854	-18.999	45.188	-7.872	-19.005	0.018	0.006
3TBL	7.868	19.017	45.221	7.872	19.005	-0.004	0.012
3BBL	16.332	-12.504	45.190	16.320	-12.523	0.012	0.019

DETECTOR 4 (DOWNSTREAM)	PITCH: 0.0135 deg.	YAW: -0.0133 deg.					
FIDUCIAL	X	Y	Z	IDEAL X	IDEAL Y	DIFF X	DIFF Y
4TBR	-12.524	16.330	67.933	-12.523	16.320	-0.001	0.010
4BBR	-7.864	-18.988	67.926	-7.872	-19.005	0.008	0.017
4TBL	7.871	19.025	67.941	7.872	19.005	-0.001	0.020
4BBL	16.326	-12.497	67.930	16.320	-12.523	0.006	0.026