



# Jefferson Lab Alignment Group

## Data Transmittal

**TO:** John Leckey

**DATE:** 04 Feb 2014

**FROM:** James Dahlberg

**Checked:** M. Walker

**# :** D1547

**DETAILS:**

Data: Insp\HallID\131101a

Listed below are the measurements taken on the beam left and beam right sides of the Fcal crystal stacks to determine the overall width. Values (in millimeters), are relative to the Fcal center as defined by the fiducial measurements taken on April 4<sup>th</sup> 2013. Although the point to point accuracy is within approximately 0.10 mm, the absolute coordinates relative to the Fcal center may be less accurate as a limited number of fiducial points on the North side were measured to construct the coordinate system. A +X is to the beam left, a +Y is up, and a +Z is downstream.

CRYSTAL LOCATIONS						
UPPER LEFT			UPPER RIGHT			
	X	Y		X	Y	WIDTH
1	302.11	1144.08	1	-299.97	1144.92	602.08
2	542.57	1064.80	2	-541.31	1065.05	1083.88
3	663.26	984.03	3	-661.68	984.45	1324.94
4	783.94	903.44	4	-782.41	904.80	1566.35
5	863.97	823.26	5	-862.63	824.04	1726.60
6	943.41	702.79	6	-942.99	704.23	1886.41
7	1023.66	582.34	7	-1062.89	543.44	2086.55
8	1144.76	302.39	8	-1143.60	302.98	2288.36

**NOTE:** The LOWER data was taken on the bottom of the 25.4 mm thick aluminum blocks supporting the detectors.

This data was shifted 25.4 mm +Y

LOWER LEFT			LOWER RIGHT			
	X	Y		X	Y	WIDTH
1	300.11	-1145.98	1	-302.19	-1144.81	602.30
2	541.03	-1065.41	2	-542.83	-1064.30	1083.86
3	661.64	-984.85	3	-663.58	-983.87	1325.21
4	781.71	-905.59	4	-783.95	-903.55	1565.66
5	862.65	-825.23	5	-864.20	-823.13	1726.86
			6	-944.36	-732.32	
7	983.10	-667.39	7	-984.95	-662.57	1968.05
8	1063.07	-545.02	8	-1064.63	-542.08	2127.70

CENTER SLOT CORNERS		
LOCATION	X	Y
BOT BL	47.40	-47.54
BOT BR	-47.35	-47.39
TOP BL	47.44	47.11
Top BR	-47.34	47.32
CL (calc)	0.05	-0.13