



# Jefferson Lab Alignment Group

## Data Transmittal

**TO:** A. Somov, T. Whitlatch

**DATE:** 02 Nov 2015

**FROM:** J. Walker

**Checked:**

**# :** D1680

**DETAILS:**

Data: Step2b\HallD\Target\151030a

High Gran Det\151104a

Low Gran Det\151029a

Below are the results from the recent surveys carried out on the Hall D Target assembly and Pair spectrometer. Values are in machine coordinates (meters). A + roll angle (in degrees), is clockwise looking from upstream, a + pitch angle is cw looking from the beam right, and a + yaw angle is ccw looking from above. The spectrometer detector values are based on the inner most upstream corner centered vertically on the upstream and downstream arrays.

**Note:** The ideal machine values for the low granularity detectors have changed. The ideal values for the high granularity detectors have also been changed based on fiducial data now centered on the inner upstream corner. Updated coordinates are listed below.

<b>LOCATION</b>	<b>Z</b>	<b>X</b>	<b>Y</b>
Target CL (150.13 mm us from end)	398.77146	80.59982	104.69998
Target Cell DS tip	398.92159	80.59979	104.69998
Target Cell G10 flange (ds face)	398.51892	80.59982	104.70001
Target Tube DS flange	398.19652	80.59976	104.70143
Scatter Chamber CL (196.63 mm us from end)	398.77336	80.60081	104.70119
Scatter Chamber US flange (ds face)	398.43150	80.60002	104.70143
Scatter Chamber US on Cylinder	398.58106	80.60051	104.70132
Scatter Chamber DS on Cylinder	398.92386	80.60104	104.70107
Scatter Chamber DS End	398.96999	80.60122	104.70104
Start Counter CL	398.77076	80.60039	104.70063
Start Counter US Cylinder	398.53831	80.59987	104.70135
Start Counter DS Cylinder	398.89565	80.60066	104.70025
Start Counter DS end	399.09456	80.60110	104.69963
Start Counter US flange (ds face)	398.42151	80.60005	104.70129

<b>IDEAL LGDET</b>	Z: 390.17743	Left X: 80.8743	Right X: 80.3257
<b>IDEAL HGDET</b>	Z: 389.64926	Left X: 80.835	Right X: 80.365

<b>SPECTROMETER</b>	<b>Z</b>	<b>X</b>	<b>Y</b>	<b>ROLL</b>	<b>PITCH</b>	<b>YAW</b>
Pair Spec. Dip. CL	386.76745	80.59980	104.69981	0.0009	-0.0112	0.0057
Left Low Gran Det.	390.18358	80.87461	104.70077	-0.0811	0.0504	4.6742
Right Low Gran Det.	390.18365	80.32538	104.70237	0.0573	-0.0705	-4.7067
Left High Gran Det.	389.69578	80.83810	104.70182	0.0072	-0.0278	4.6797
Right High Gran Det.	389.69587	80.36113	104.70181	0.0175	-0.0014	-4.6757