



# Jefferson Lab Alignment Group

## Data Transmittal

**TO:** P. King, T. Horn, C. Munoz Camacho, J. Butler

**DATE:** 10/28/2016

**FROM:** Kelly Tremblay

**Checked:** cg

**# :** A1745

**DETAILS:**

data : aalign\electron&sh\2016\E102716a

Below are the results from the survey of the left spectrometer on October 27<sup>th</sup>, 2016. The horizontal pointing value shows how much the central axis of the spectrometer misses the ideal target. This value is perpendicular to the spectrometer axis, not along the beam line. For the vertical pointing, a positive value indicates that the spectrometer is pointing above the target.

A graphical sketch is shown at the end of this transmittal.

===== RESULTS ===== E102716A

The central ray of the spectrometer is at 37.008 degrees  
The central ray is missing the defined target center by 0.66 [mm] Upstream  
and -1.29 mm vertically [positive value is up]

If the offset is corrected by secondary alignment, the spectrometer will be at 37.013 degrees

To achieve this optimal setting  
make the following adjustments:  
spectrometer will be at 37.013 degrees  
Horizontal corrections:  
Move rear jacks along tangent 0.67 mm Upstream

9 Par Aposter Val : 0.15 (mm)  
No 3DD output file available to report std. dev

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E102716A

- Beam-Spec Intercept Point
- Beam-Spec Perpendicular Point
- Spectrometer Projected Target Point
- ⊗ Straight-Ahead Target Point [ideal]

angles: delta : 37.00835 [degrees]  
beam : 142.49998 [degrees]  
spectrometer: 179.50834 [degrees]

perpendicular distance : 0.658 [mm]  
target - intersect dis : 1.093 [mm]  
found target - intersect dis : 1.807 [mm]  
Spectrometer is -1.29 lower than ideal target [m]

- Spectrometer Line
- Straight-Ahead Beam
- Perpendicular line

