



# Jefferson Lab Alignment Group

## Data Transmittal

**TO:** J. Butler, J. Gomez, C. Keppel, D. Higginbotham

**DATE:** 08/30/2018

**FROM:** Steve Hardisty

**Checked:** CWG

**# :** A1883

**DETAILS:**

data : aalign\electron\2018\E083018A

Below are the results from the survey of the left spectrometer on August 30 2018. 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 ===== E083018

The central ray of the spectrometer is at -17.006 degrees  
The central ray is missing the defined target center by 1.63 [mm] Downstream  
and -0.82 mm vertically [positive value is up]

If the offset is corrected by secondary alignment, the spectrometer will be at -17.017 degrees

To achieve this optimal setting  
make the following adjustments:  
spectrometer will be at -17.017 degrees  
Horizontal corrections:  
Move rear jacks along tangent -1.66 mm Downstream

9 Par A posteriori value : 0.13 (mm)

E083018

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

angles: delta : 17.00641 [degrees]  
beam : 142.49998 [degrees]  
spectrometer: 159.50639 [degrees]

perpendicular distance : 1.624 [mm]  
target - intersect dis : 5.553 [mm]  
found target - intersect dis : 6.827 [mm]  
Spectrometer is -0.82 lower than ideal target [mm]

- Spectrometer Line
- Straight-Ahead Beam
- Perpendicular line

