



Jefferson Lab Alignment Group

Data Transmittal

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Checked: SEH

: A1861

DETAILS:

data : aalign\electron\2018\E050218A&E050218B

Below are the results from two surveys of the left spectrometer on May, 02, 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. E050218A is an as-found, E050218B is an as-set. A graphical sketch is shown at the end of this transmittal

===== RESULTS ===== E050218A

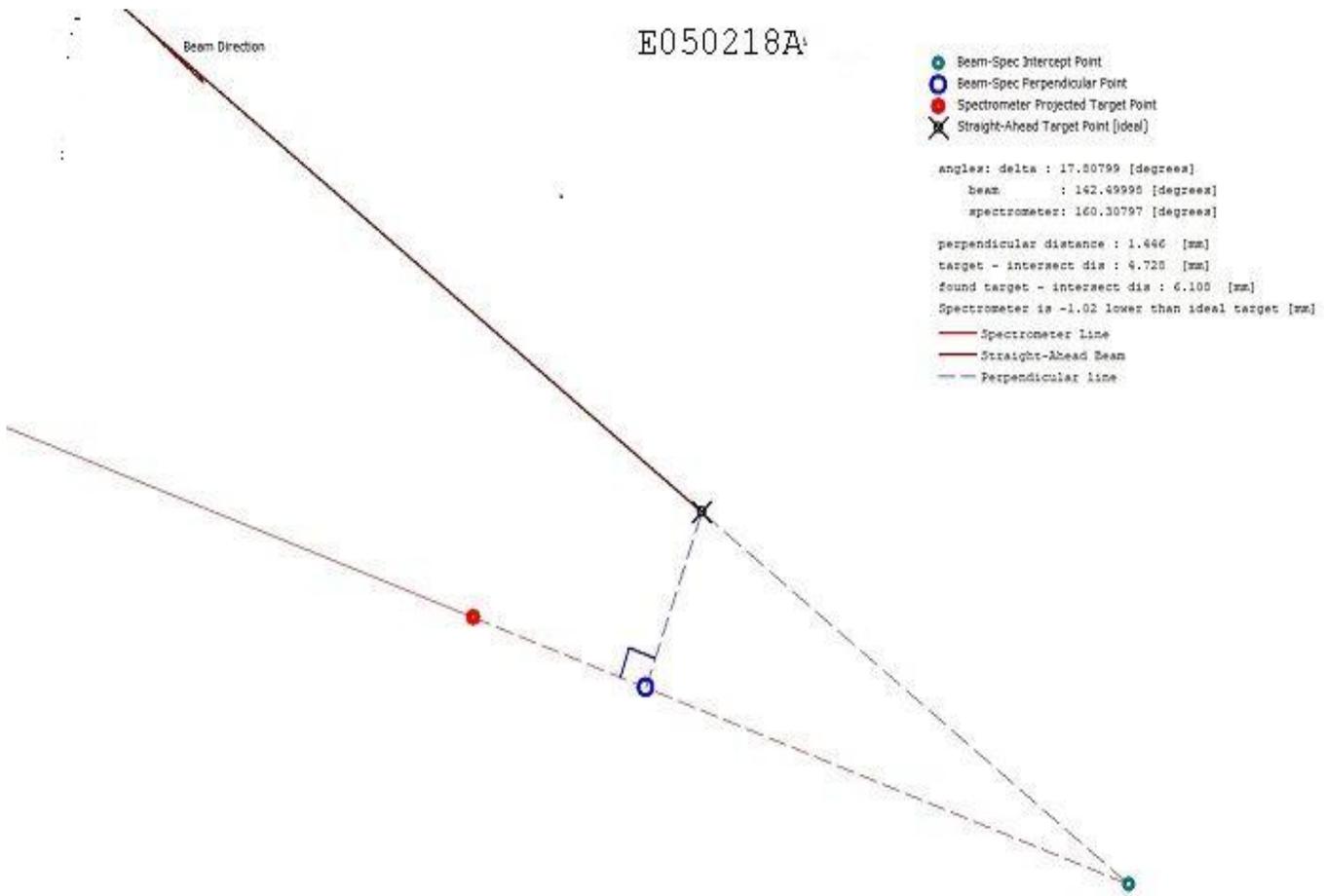
The central ray of the spectrometer is at -17.808 degrees
The central ray is missing the defined target center by 1.45 [mm] Downstream
and -1.02 mm vertically [positive value is up]

If the offset is corrected by secondary alignment, the spectrometer will be at -17.818 degrees

To achieve this optimal setting
make the following adjustments:
spectrometer will be at -17.818 degrees
Horizontal corrections:
Move rear jacks along tangent -1.48 mm Downstream

9 Par A posteriori value : 0.15 (mm)

E050218A



===== RESULTS ===== E050218B

The central ray of the spectrometer is at **-15.007 degrees**
The central ray is missing the defined target center by **1.34 [mm] Downstream**
and **-1.40 mm** vertically [positive value is up]

If the offset is corrected by secondary alignment, the spectrometer will be at **-15.016 degrees**

To achieve this optimal setting
make the following adjustments:
spectrometer will be at **-15.016 degrees**

Horizontal corrections:

Move rear jacks along tangent **-1.36 mm Downstream**

9 Par A posteriori value : **0.17 (mm)**

E050218B

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

angles: delta : 15.00678 [degrees]
beam : 142.49998 [degrees]
spectrometer: 157.50677 [degrees]

perpendicular distance : 1.335 [mm]
target - intersect dis : 5.155 [mm]
found target - intersect dis : 6.634 [mm]
Spectrometer is -1.40 lower than ideal target [mm]

- Spectrometer Line
- Straight-Ahead Beam
- Perpendicular line

