



Jefferson Lab Alignment Group

Data Transmittal

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DATE: 05/14/2018

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Checked: (kjt)

: A1863

DETAILS:

data : aalign\electron\2018\E051418A & hadron\2018\H051418A

Below are the results from the survey of the left and right spectrometers on May, 14, 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

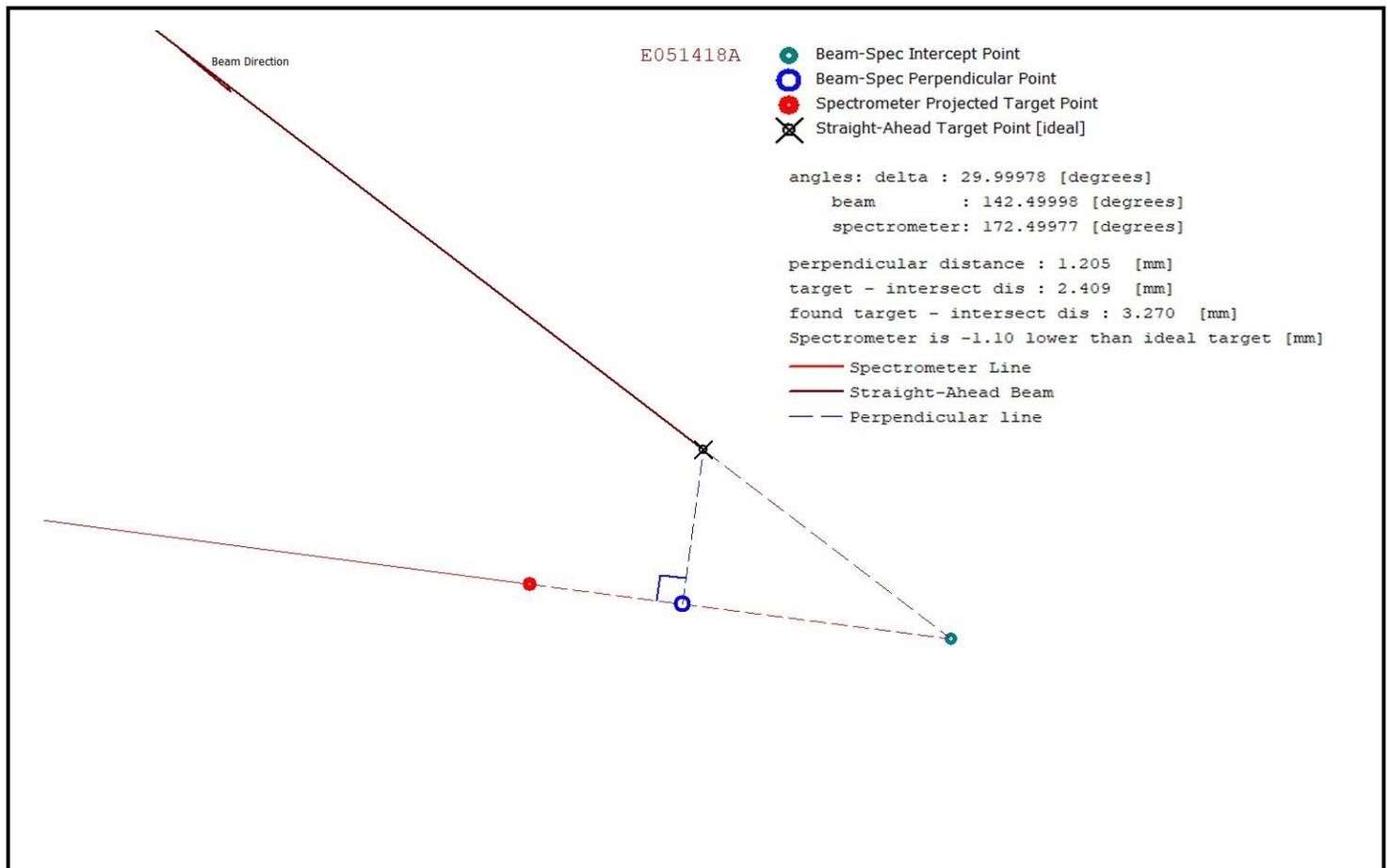
===== RESULTS ===== E051418A

The central ray of the spectrometer is at 30.000 degrees
The central ray is missing the defined target center by 1.21 [mm] Downstream
and -1.10 mm vertically [positive value is up]

If the offset is corrected by secondary alignment, the spectrometer will be at 30.008 degrees

To achieve this optimal setting
make the following adjustments:
spectrometer will be at 30.008 degrees
Horizontal corrections:
Move rear jacks along tangent 1.23 mm Downstream

9 Par A posteriori value : 0.13 (mm)



===== RESULTS ===== H051418A

The central ray of the spectrometer is at 42.027 degrees
 The central ray is missing the defined target center by 4.03 [mm] Downstream
 and -1.79 mm vertically [positive value is up]

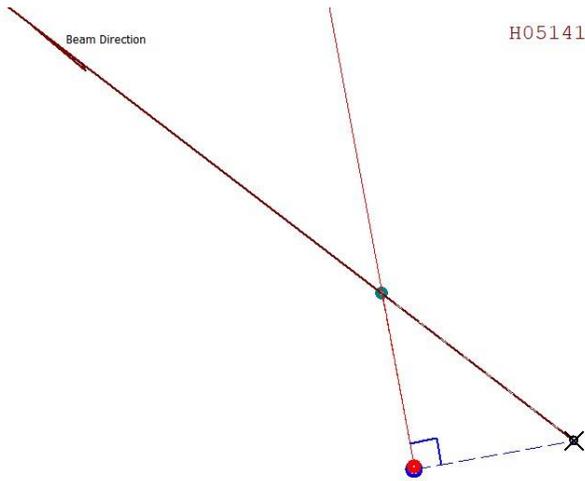
If the offset is corrected by secondary alignment, the spectrometer will be at 42.000 degrees

To achieve this optimal setting
 make the following adjustments:
 spectrometer will be at 42.000 degrees
 Horizontal corrections:

Move rear jacks along tangent -4.10 mm Downstream

9 Par A posteriori value : 0.23 (mm)

H051418A



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

angles: delta : 42.02723 [degrees]
beam : 142.49998 [degrees]
spectrometer: 100.47276 [degrees]

perpendicular distance : 4.032 [mm]
target - intersect dis : 6.022 [mm]
found target - intersect dis : 4.389 [mm]
Spectrometer is -1.79 lower than ideal target [mm]

- Spectrometer Line
- Straight-Ahead Beam
- Perpendicular line