



Jefferson Lab Alignment Group

Data Transmittal

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Checked: [kjt]

: A1774

DETAILS:

Below are the results from the surveys of the left and right spectrometers on February 22nd, 2017. 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 after each of the four results.

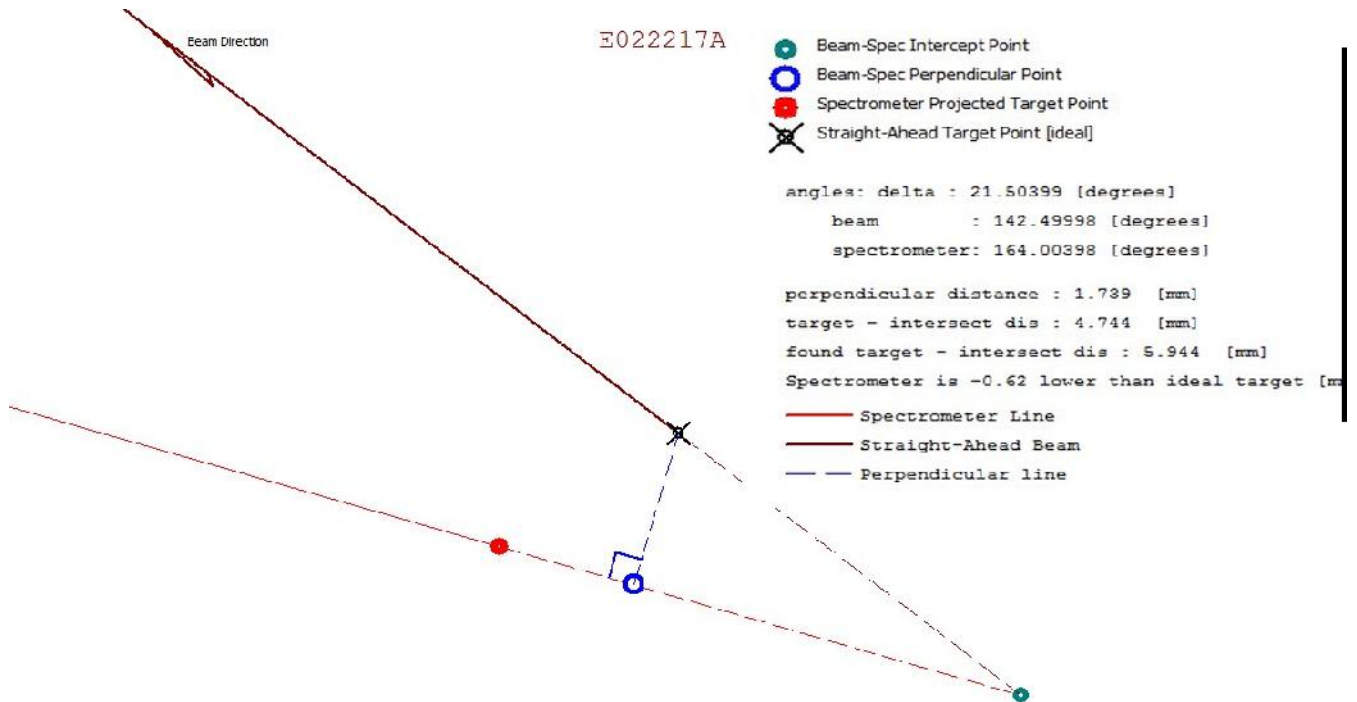
===== RESULTS ===== E022217A

The central ray of the spectrometer is at -21.504 degrees
The central ray is missing the defined target center by 1.74 [mm] Upstream
and -0.62 mm vertically [positive value is up]

If the offset is corrected by secondary alignment, the spectrometer will be at -21.516 degrees

To achieve this optimal setting
make the following adjustments:
spectrometer will be at -21.516 degrees
Horizontal corrections:
Move rear jacks along tangent 1.77 mm Upstream

9 Par Aposter Val : 0.12 (mm)
No 3DD output file available to report std. dev



===== RESULTS ===== E022217B

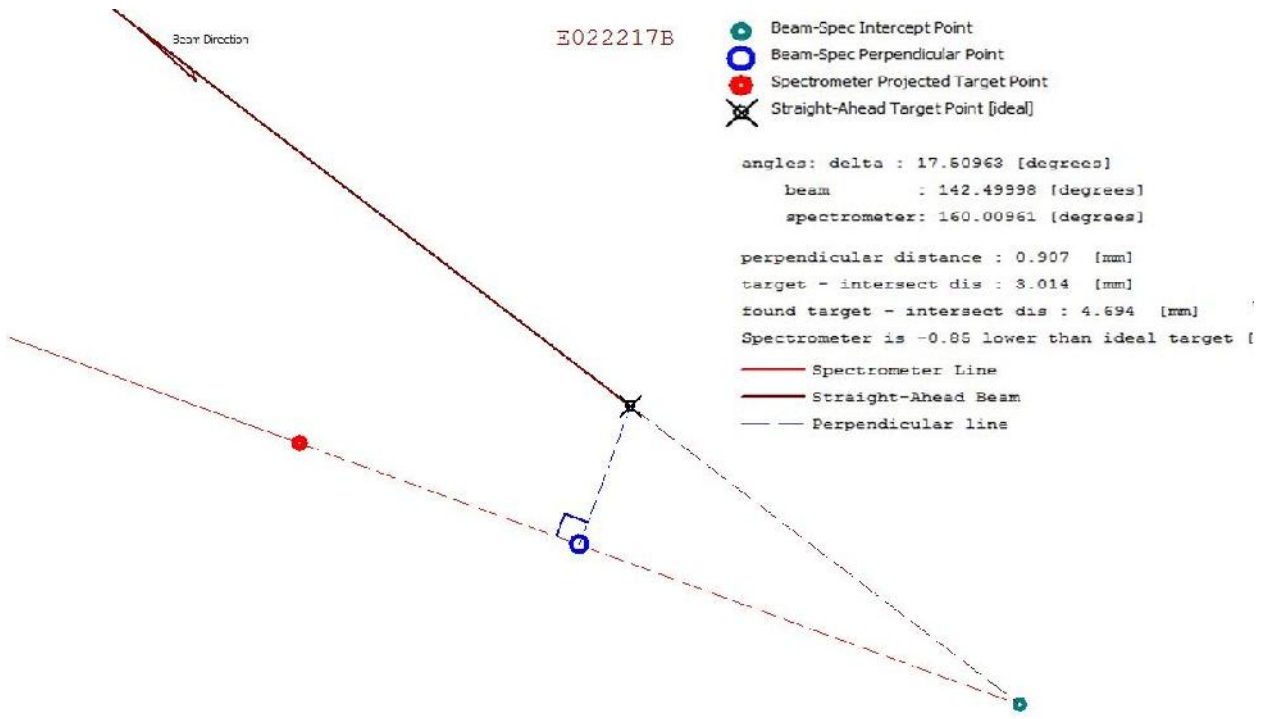
The central ray of the spectrometer is at -17.510 degrees
 The central ray is missing the defined target center by -0.90 [mm] Upstream
 and -0.85 mm vertically [positive value is up]

If the offset is corrected by secondary alignment, the spectrometer will be at -17.516 degrees

To achieve this optimal setting
 make the following adjustments:
 spectrometer will be at -17.516 degrees
 Horizontal corrections:

Move rear jacks along tangent -0.91 mm Upstream

9 Par Aposter Val : 0.13 (mm)
 No 3DD output file available to report std. dev



===== RESULTS ===== H022217A

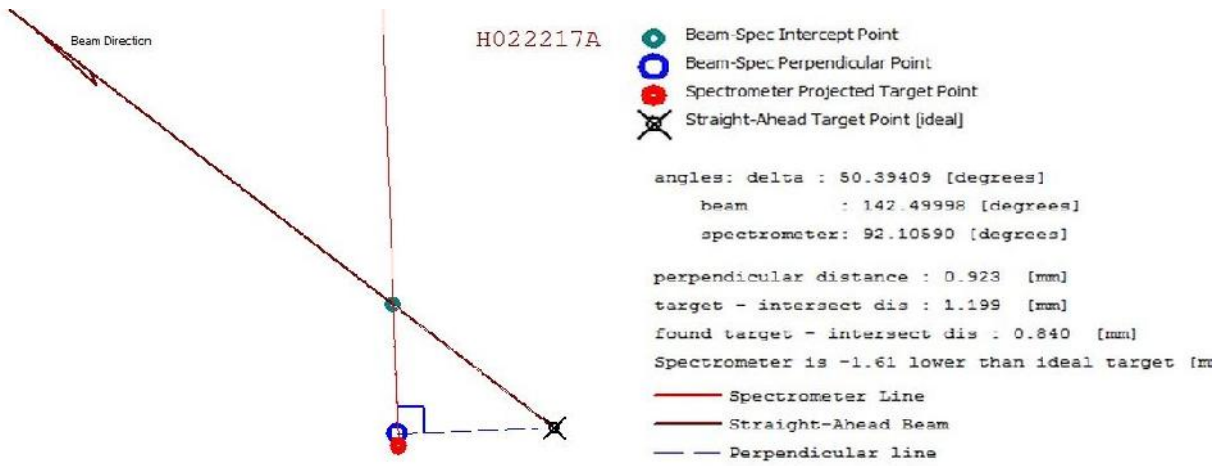
The central ray of the spectrometer is at 50.394 degrees
 The central ray is missing the defined target center by -0.92 [mm] Upstream
 and -1.61 mm vertically [positive value is up]

If the offset is corrected by secondary alignment, the
 spectrometer will be at 50.388 degrees

To achieve this optimal setting
 make the following adjustments:
 spectrometer will be at 50.388 degrees
 Horizontal corrections:

Move rear jacks along tangent -0.94 mm Upstream

9 Par Aposter Val : 0.24 (mm)
 No 3DD output file available to report std. dev



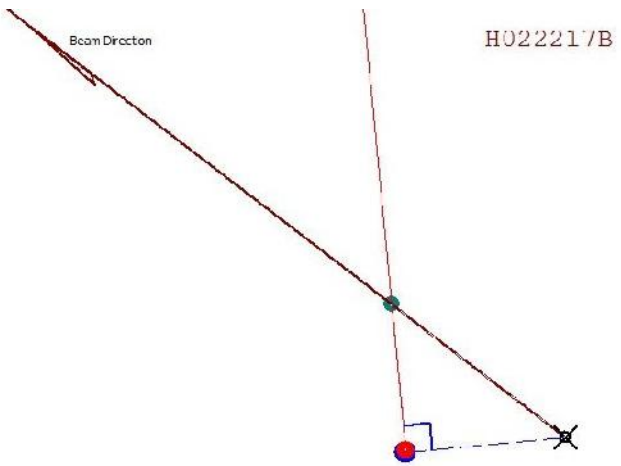
===== RESULTS ===== H022217B

The central ray of the spectrometer is at 47.024 degrees
 The central ray is missing the defined target center by -3.15 [mm] Upstream
 and -1.68 mm vertically [positive value is up]

If the offset is corrected by secondary alignment, the spectrometer will be at 47.002 degrees

To achieve this optimal setting
 make the following adjustments:
 spectrometer will be at 47.002 degrees
 Horizontal corrections:
 Move rear jacks along tangent -3.20 mm Upstream

9 Par Aposter Val : 0.23 (mm)
 No 3DD output file available to report std. dev



H022217B

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

angles: delta : 47.02361 [degrees]
 beam : 142.49998 [degrees]
 spectrometer: 95.47637 [degrees]

perpendicular distance : 3.150 [mm]
 target - intersect dis : 4.305 [mm]
 found target - intersect dis : 2.884 [mm]
 Spectrometer is -1.68 lower than ideal target [m]

- Spectrometer Line
- Straight-Ahead Beam
- - Perpendicular line