



Jefferson Lab Alignment Group

Data Transmittal

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Checked: (seh)

: C1793

DETAILS:

data: aalign\shms\s170530

Below are the results from the survey of SHMS spectrometer on May 30^h, 2017. The location of the SHMS was close to the straight-ahead beamline. 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.

===== RESULTS ===== S170528

The central ray of the spectrometer is at -10.479 degrees

FOR SHMS REPORTING angle is : 7.4787 degrees

The central ray is missing the defined target center by -0.06 [mm] Downstream
and 1.29 mm vertically [positive value is up]

Bender RotZ (roll) = 0.00692 degrees

Bender RotX (pitch) = 0.02302 degrees

Bender RotY (yaw) = 133.43109 degrees

Bender Rotation wrt Hall C Zero Azimuth = 9.05323 degrees

Bender Calc A posteriori value= 0.020 millimeters

9 Par A posteriori value : 0.12 (mm)

A sketch shows the results on the following page.

S170528

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

angles: delta : 10.47873 [degrees]
beam : -142.48325 [degrees]
spectrometer: 227.99548 [degrees]

perpendicular distance : 0.064 [mm]
target - intersect dis : 0.352 [mm]
found target - intersect dis : 0.477 [mm]
Spectrometer is 1.29 higher than ideal target [mm]

- Spectrometer Line
- Straight-Ahead Beam
- Perpendicular line

SHMS CASE :

Bender Reporting Angle : 7.47873 [degrees]
Bender Rotation wrt Hall C Zero Az = 9.05323 [deg]

Beam Direction

