



# Jefferson Lab Alignment Group Data Transmittal

TO: B. Sawatzky, D. Gaskel, M. Jones, S. Lassiter, M. Fowler

DATE: 11/27/2019

FROM: Kelly Tremblay

Checked:

# : C1953

**DETAILS:**

data: aalign\hms\2019\m112619

Below are the results from the survey of HMS spectrometer November 26<sup>th</sup>, 2019. The HMS fiducial points were observed from the beam left side of the spectrometer.

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 ===== M112619

The central ray of the spectrometer is at 30.002 degrees  
The central ray is missing the defined target center by 2.44 [mm] Upstream  
and -1.05 mm vertically [positive value is up]

9 Par A posteriori value : 0.84 (mm)

M112619 -->

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

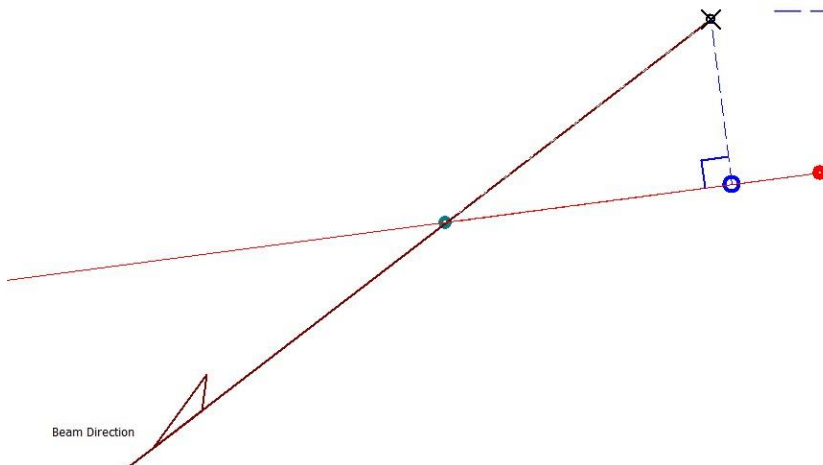
```

angles: delta : 30.00247 [degrees]
        beam   : -142.48325 [degrees]
        spectrometer: 187.51428 [degrees]

perpendicular distance : 2.440 [mm]
target - intersect dis : 4.879 [mm]
found target - intersect dis : 5.518 [mm]
Spectrometer is -1.05 lower than ideal target [mm]

```

- Spectrometer Line
- Straight-Ahead Beam
- Perpendicular line



Beam Direction

