#  <br> Jefferson Lab Alignment Group Data Transmittal 

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FROM: Kelly Tremblay DETAILS:

The Microscope (scintillators) near the Hall D tagger magnet were located on January $14^{\text {th }}$, 2019. The results are shown below.

The ideal and found coordinates are shown in meters relative to the CEBAF coordinate system. The beam following coordinates (bfs - millimeters) are also shown and are described as follows: Negative x is to the beam right from ideal beam looking downstream; positive $y$ is the amount higher than beamline; negative $z$ is amount upstream from ideal target. Positive yaw is the counter clockwise rotation about the Y axis; negative pitch is the clockwise rotation about the X axis (physics standard); positive roll is the clockwise rotation about the Z axis.

|  | Cebaf Coordinate Location [meters] |  |  | Beam Following [millimeters] |  |  | Angular Position [degrees ] |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Microscope | $\mathbf{X}[\mathbf{m}]$ | $\mathbf{Y}[\mathbf{m}]$ | $\mathbf{Z}[\mathbf{m}]$ | $\mathbf{d X}[\mathbf{m m}]$ | $\mathbf{d Y}[\mathbf{m m}]$ | $\mathbf{d Z}[\mathbf{m m}]$ | Yaw $^{\mathbf{0}}$ | Pitch $^{\mathbf{0}}$ | Roll $^{\mathbf{0}}$ |
| Ideal | 79.43323 | 104.70000 | 306.52356 | - | - | - | -8.0500 | 0.0000 | 0.0000 |
| As-found | 79.43318 | 104.70753 | 306.52326 | -0.09 | 0.18 | -0.29 | -8.0513 | 0.0020 | 0.0668 |

