# - 3e, <br> Jefferson Lab Alignment Group Data Transmittal 

TO: J. Gubeli
FROM: Kelly Tremblay
DETAILS:

DATE: 04/29/2019
Checked:
\# : F1919
data : step2bVerfliso\190329a

Magnet MQX1X01 was aligned on March 29 ${ }^{\text {th }}$, 2019. The results are shown below.
The ideal and found coordinates are shown in meters relative to the FEL coordinate system. The beam following coordinates (millimeters) are also shown and are described as follows: Positive x is to the beam left from ideal beam looking downstream; Positive y is the amount lower than beamline; negative z is amount upstream from the ideal position.

The angular displacements are shown in degrees. 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.

|  | Ideal |  |  | Found |  |  | Beam Following |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | ---: | ---: | ---: |
|  | $\mathrm{x}[\mathrm{m}]$ | $\mathrm{y}[\mathrm{m}]$ | $\mathrm{z}[\mathrm{m}]$ | $\mathrm{x}[\mathrm{m}]$ | $\mathrm{y}[\mathrm{m}]$ | $\mathrm{z}[\mathrm{m}]$ | $\mathrm{dx}[\mathrm{mm}]$ | $\mathrm{dy}[\mathrm{mm}]$ | $\mathrm{dz}[\mathrm{mm}]$ |
| MQX1X01 | 19.36948 | 105.00000 | 39.90165 | 19.36977 | 105.00005 | 39.90235 | 0.087 | 0.046 | -0.754 |


| Angular displacements BFS |  |  |
| :--- | :--- | :--- |
| dYaw | dPitch | dRoll |
| 0.04363 | 0.00974 | 0.00000 |

