#  <br> Jefferson Lab Alignment Group Data Transmittal 

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## DETAILS:

The pitched beampipe between MMC1P01 and MMC1P02 and level pipe between MMC1P01 and MMC1P04 was checked on July 19th, 2018. The results transverse to the beamlines are shown below. Note that the beamline data was generated by Yves Roblin in 2016.

Units are millimeters with $+x$ transverse to the pitched beam left and $+y$ the perpendicular distance to the pitched beam. $Z$ distances are from the ideal exit of MMC1P01. The two straight ahead points $z$ distances are from the entry of MMC1P01 and with $+x$ to the beam left and +y above the beam.

| Pitched Points |  |  |  |
| :--- | ---: | ---: | ---: |
| Beampipe location | $x[\mathrm{~mm}]$ | $\mathrm{y}[\mathrm{mm}]$ | $\mathrm{z}[\mathrm{mm}]$ |
| ds MMC1P01 | -1.72 | 0.67 | 1273 |
| us bpm flange | 2.24 | -3.81 | 2728 |
| ds bpm flange | 1.67 | -3.85 | 2956 |
| us MMC1P02 | 1.81 | -3.89 | 3276 |
| Straight ahead beamline |  |  |  |
|  |  |  |  |
| Point | $\mathrm{x}[\mathrm{mm}]$ | $\mathrm{y}[\mathrm{mm}]$ | $\mathrm{z}[\mathrm{mm}]$ |
| us | -0.12 | 0.03 | 1773 |
| ds | 0.29 | -0.58 | 5521 |

Magnets MMC1P01 and MMC1P02 positins were checked and are as shown below. The found values are listed in millimeters from the ideal along beamline. A positive x is transverse to the beam left, positive dy is above the beamline, negative dz is upstream from the ideal. The angles are deltas from ideal (degrees).

|  | deltas beam following |  |  | delta angles (degrees) |  |  |
| :---: | ---: | ---: | ---: | :--- | :--- | :--- |
| Magnet | $x[\mathrm{~mm}]$ | $y[\mathrm{~mm}]$ | $\mathrm{z}[\mathrm{mm}]$ | dYaw | dPitch | dRoll |
| MMC1P01 | 0.00 | 0.05 | 0.12 | 0.00688 | -0.00372 | 0.00602 |
| MMC1P02 | 0.03 | 0.08 | -0.16 | 0.00562 | -0.01289 | 0.01003 |

