#  <br> Jefferson Lab Alignment Group <br> Data Transmittal 

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\# : M1930
DETAILS:

On April $11^{\text {th }}, 2019$ we were tasked with aligning electrode CIS-ASY-1 to the as-found location of the previous electrode. Because the previous electrode had no external Yaw reference, we defined this orientation by using the upstream and downstream flanges of the gun vacuum chamber. It is also important to note that the origin of CIS-ASY-1 is on the downstream face of the puck unlike previous surveys that placed $Z=0$ at the center of the stalk. Included are the as-set locations and the deltas from the previous cathode location.

| CIS-ASY-1 As-Set |  |  |  |
| :--- | :---: | :---: | :---: |
|  | X | Y | Z |
| UITF Machine Coordinates (M) | 10.67327 | 21.06636 | 31.46697 |
|  | rX (Pitch) | rY (Yaw) | rZ (Roll) |
| ROTATIONS | -0.0857 | -13.8536 | 0.0283 |
|  | $\mathbf{X}$ | $\mathbf{Y}$ |  |
| Beam Following (mm) | 9.13 | -0.44 |  |
|  | rX (Pitch) | rY (Yaw) | rZ (Roll) |
| ROTATIONS | -0.0784 | 1.1464 | 0.0275 |


| Deltas From Previous Survey |  |  |  |
| :--- | ---: | ---: | ---: |
|  | X | Y | $\mathbf{Z}$ |
| Beam Following (mm) | 0.02 | -0.05 | -0.28 |
|  | rX (Pitch) | rY (Yaw) | rZ (Roll) |
| ROTATIONS | 0.0332 | -0.0006 | -0.0459 |

