# - 马exater <br> Jefferson Lab Alignment Group Data Transmittal 

TO: J. Grames
DATE: 31 Oct 2013
FROM: Chris Gould
Checked:
\# : L1525
DETAILS:
M: align\DATA\Step2B\INJ\131017A
The 1D line survey results are shown below. A coordinate system was established on the upstream and downstream flanges such that $X$ and $Y$ equals zero. A positive $X$ is to the beam left, a positive $Y$ is up and a positive $Z$ is downstream. In addition to the local coordinate system, CEBAF coordinates are provided. Yaw and pitch angles were calculated from the straight ahead beam to the constructed $Z$ axis. A negative yaw angle is rotated counter clockwise about the Y axis when viewed from above. A positive pitch angle is rotated clockwise about the $X$ axis when viewed from the right.

|  | LOCAL COORD SYSTEM |  |  | MECH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NAME | X | Y | Z | X | Y | Z |
| US_FLANGE | 0.00 | 0.00 | 0.00 | 80.53634 | 100.00260 | -252.55129 |
| ICB1D00_US | -0.35 | -0.09 | 648.00 | 80.21755 | 100.00110 | -251.98713 |
| ICB1D00_DS | -0.27 | -0.05 | 711.00 | 80.18665 | 100.00101 | -251.93223 |
| IHA1D00_US | -0.13 | -0.05 | 820.00 | 80.13320 | 100.00076 | -251.83723 |
| DS_FLANGE | 0.00 | 0.00 | 1066.40 | 80.01221 | 100.00028 | -251.62258 |


|  | PITCH | YAW |
| :--- | ---: | :--- |
| Angle from 80.600 beam line to 1D line | 0.15 | -29.44 |

