# Mumax <br> Jefferson Lab Alignment Group Data Transmittal 

TO: Kelly Dixon
DATE: 09 May 2012
FROM: James Dahlberg Checked: SEH $\quad$ \#: P1452 DETAILS:

Below are the results from the survey carried out on the CHL upper and lower cold boxes. A right handed coordinate system was established centered on the lower cold box pipe with the $Z$ axis running parallel to the edge of the cold box Dewar. The $Y$ axis is up parallel with gravity and $a+X$ is to the left looking toward the upper cold box. Note that point " $A$ " is at the top of the pipe, not at the lower intersection at the Dewar as the "SKETCH" drawing shows. Also, point E was not surveyed. Values are in inches and degrees.

| POINT NAME | $\mathbf{X}$ | $\mathbf{Y}$ | $\mathbf{Z}$ | DIA. | PROJ. ANG. <br> Rx from $\mathbf{Y}$ | PROJ. ANG. <br> Ry from Z | PROJ. ANG. <br> Rz from $\mathbf{X}$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IBEAM POINT B | -77.41 | 145.53 | 26.39 |  |  |  |  |
| 2ND IBEAM | -77.33 | 145.38 | 206.32 |  |  |  |  |
| IBEAM POINT C | -76.82 | 145.41 | 566.55 |  |  |  | 89.705 |
| TOP OF PIPE POINT A | 0.00 | 0.00 | 0.00 | 23.97 | 359.810 |  | 179.888 |

