# *Jefferson Lab Alignment Group*

## Data Transmittal

| | | |
|---|---|---|
| **TO:** G. Smith, D. Gaskell, J. Benesch, Y. Wang | | **DATE:** 15 Mar 2006 |
| **FROM:** J. Dahlberg | **Checked:** | **# :** C1049 |

**DETAILS:**

Below are the results of the survey performed on the G0 back angle SMS, target, and ferris wheel. The values are relative to the ideal position in millimeters and degrees. A +Z is downstream, a + X is to the beam left, and a +Y is up. A +yaw angle is counter clockwise looking from above, a +pitch is ccw looking from the beam right, and a +roll is cw looking from upstream towards downstream. Note that the SMS was moved upstream to accommodate the installation of the downstream spool piece and also note the large offsets for the target center. There is no external alignment capability for the target service module and therefore, corrections should be applied to the previously measured target calibration data to incorporate these offsets. Also, the ferris wheel was not in the final Z location during this survey as shown below.

| LOCATION | Z | X | Y | YAW | PITCH | ROLL |
|---|---|---|---|---|---|---|
| Target center | -15.28 | 4.10 | -2.44 | 0.144 | 0.017 | -0.638 |
| Ferris Wheel | -73.35 | -1.11 | -0.05 | -0.002 | 0.002 | 0.008 |
| Octant 1 | -73.42 | -1.26 | -0.15 | 0.002 | -0.026 | 0.003 |
| Octant 2 | -73.44 | -1.20 | 0.64 | -0.012 | 0.022 | 0.001 |
| Octant 3 | -73.29 | -0.27 | 1.38 | 0.007 | 0.014 | -0.001 |
| Octant 4 | -73.28 | -1.44 | 1.12 | -0.013 | 0.021 | 0.010 |
| Octant 5 | -73.26 | -1.03 | -2.21 | 0.044 | -0.049 | 0.029 |
| Octant 6 | -73.26 | -1.04 | 0.00 | 0.018 | 0.024 | 0.021 |
| Octant 7 | -73.10 | -0.69 | 0.10 | -0.010 | 0.001 | -0.005 |
| Octant 8 | -73.29 | -1.83 | -2.13 | -0.035 | -0.031 | -0.022 |
| SMS | -32.27 | 0.10 | -0.16 | 0.024 | 0.009 | 0.004 |