



Jefferson Lab Alignment Group

Data Transmittal

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DATE: 09 Aug 2007

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Checked:

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DETAILS:

Below are the results of the recent survey for the He3 coils. A right hand coordinate system was established using the machined surface of the bottom coil as the ZX plane. Rotation around the vertical axis was controlled using the frame parallel to beam axis. A positive X is to the beam left, a positive Z is downstream and a positive Y is up. Sixteen points were taken every 22.5°. The first shot (the 12 o'clock position) starts at the downstream beam axis and continues in a clockwise fashion viewed from above. Values are in millimeters.

| COMPONENT | Z | X | Y | Flatness | Roundness |
|------------------|----------|----------|----------|-----------------|------------------|
| Bottom coil | 0.00 | 0.00 | 0.00 | 4.28 | 1.41 |
| Top coil | -1.42 | -1.11 | 946.00 | 3.63 | 1.17 |

Y Values for both coils used to define parallelism and flatness

| | <u>Bottom coil</u> | <u>Top coil</u> |
|----|--------------------|-----------------|
| 1 | -1.04 | 944.97 |
| 2 | -1.25 | 945.66 |
| 3 | -0.61 | 946.87 |
| 4 | -0.37 | 947.41 |
| 5 | 1.47 | 946.90 |
| 6 | 2.19 | 945.46 |
| 7 | 0.94 | 944.31 |
| 8 | -0.67 | 944.40 |
| 9 | -1.79 | 945.19 |
| 10 | -2.08 | 946.92 |
| 11 | -0.62 | 948.28 |
| 12 | 1.35 | 947.76 |
| 13 | 1.89 | 946.96 |
| 14 | 0.89 | 945.41 |
| 15 | 0.18 | 944.76 |
| 16 | -0.47 | 944.79 |