



Jefferson Lab Alignment Group

Data Transmittal

TO: D. Kashy, B. Miller, V. Burkert

DATE: 13 Jan 2016

FROM: Kelly Tremblay

Checked:

: B1690

DETAILS:

data: inspection\hallb\torus12g\160113a

The Hall B torus was inspected on January 12th, 2016. The torus was raised on the upstream hub to reduce the pitch found in previous surveys. The upstream and downstream hubs were located and are shown below. The coordinates are relative to the incoming design beam with Z zero being the coil case design zero point (ref. dwg. B00000-04-01-1101). The +Z axis is along the beamline downstream, X is in the horizontal plane, beam left and Y is orthogonal to the Z/X plane, vertically. Coordinates and distance units are millimeters and degrees for angular values.

| Calculated Hub Points | | | |
|-----------------------|---------|------|---------|
| Coil | x | y | z |
| US | -1.38 | 0.02 | 461.37 |
| DS | -0.96 | 0.79 | 2511.94 |
| Angle Information | | | |
| pitch | 0.0217° | | |
| yaw | 0.0117° | | |

The outer fiducials were located on coils B,D and F.

| Upstream Points Found | | | | Ideals | | | Deltas | | |
|-------------------------|----------|----------|---------|----------|----------|---------|--------|-------|-------|
| Coil | x | y | z | x | y | z | x | y | z |
| B | -2777.82 | 1603.48 | -496.69 | -2777.63 | 1603.47 | -506.82 | -0.19 | 0.01 | 10.13 |
| D | -1.70 | -3208.51 | -493.27 | 0.77 | -3207.36 | -507.04 | -2.47 | -1.15 | 13.77 |
| F | 2775.41 | 1601.83 | -498.34 | 2777.63 | 1603.66 | -507.05 | -2.22 | -1.83 | 8.71 |
| Downstream Points Found | | | | Ideals | | | Deltas | | |
| Coil | x | y | z | x | y | z | x | y | z |
| B | -3650.37 | 2105.03 | 887.92 | -3648.27 | 2106.44 | 878.14 | -2.10 | -1.41 | 9.78 |
| D | 0.11 | -4213.48 | 892.24 | -0.50 | -4212.87 | 878.31 | 0.61 | -0.61 | 13.93 |
| F | 3647.50 | 2105.92 | 885.41 | 3648.62 | 2106.64 | 878.22 | -1.12 | -0.72 | 7.19 |