



Jefferson Lab Alignment Group

Data Transmittal

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Checked:

: C1282

DETAILS:

Data: step2b\hallc\qweak\100323a

The lintels on the QTOR magnet were surveyed March 22/23, 2010. There are no fiducial (survey reference marks) on the lintels. As a result the edges that were visible to our survey equipment were measured. Only two edges were measured for each lintel. The edges surveyed were not necessarily the closest to the beam centerline. This resulted in the edges closest to the beam having to be interpreted from the observation data using the design dimensions from drawing 67503-E-00042

The results below show the upstream and downstream coordinates at the perpendicular point on each interpreted edge. The coordinate system is based on the ideal center of the QTOR magnet as the origin, with +z along beam, +x beam left, and +y vertical. The points refer to the coils with the suffix D for downstream, U for upstream. Point 23D would be the lintel between coils 2 and 3, downstream perpendicular point.

The movements shown are from the current position to an "ideal" position for the upstream edge of the lintel. The ideal position is 121.5 centimeters from the beam line to the upstream edge. All the movements are outward radially from the beam line (units are millimeters).

Point	Z	X	Y	PerDist	Movement
23D	-594.1	-873.0	873.0	1234.6	
23U	-687.7	-848.0	848.0	1199.3	15.7
34D	-595.6	-1227.0	0.0	1227.0	
34U	-689.1	-1191.5	0.0	1191.5	23.5
45D	-595.1	-868.6	-868.5	1228.3	
45U	-688.6	-843.9	-843.3	1193.1	21.9
56D	-594.1	0.0	-1233.9	1233.9	
56U	-687.7	0.0	-1198.3	1198.3	16.7
67D	-593.9	870.6	-870.6	1231.2	
67U	-687.4	845.6	-845.6	1195.9	19.1
78D	-592.8	1230.0	0.2	1230.0	
78U	-686.4	1194.9	0.0	1194.9	20.1
89D	-592.5	867.6	867.9	1227.2	
89U	-686.5	843.1	843.1	1192.3	22.7
92D	-593.5	0.0	1228.0	1228.0	
92U	-687.2	0.0	1192.3	1192.3	22.7

