Jefferson Lab Alignment Group

Data Transmittal

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DETAILS:

data: step2b\hallc\qweak\101104A

The Qweak target cells were surveyed on November 3rd, 2010. The results are shown below. The ideal for each cell was calculated 606.36 centimeters downstream of the pivot point. The ideal target coordinates and angles in the Cebaf coordinate system (0,0,0 at accelerator center) are shown for reference.

Differences from the ideal positions are shown as dX/dY/dZ. A +dX value indicates the calculated center of the cell is to the beam left of the ideal X coordinate; a +dY is above the ideal Y coordinate; a positive dZ indicates downstream from the ideal Z coordinate.

The dYaw/dPitch/dRoll values are the differences from the ideal values. A positive dYaw is rotated counterclockwise when looked from above; positive dPitch is rotated counterclockwise when looked towards the beam left from beam right; positive dRoll is clockwise about the beam.

Ideal Coordinates / Angles of target						
	X (m)	Y (m)	Z (m)	Yaw °	Pitch °	Roll °
TARGET	-128.31446	99.98834	-393.10324	-142.4832	0.0000	0.0000
As-found Cells						
Cell	dX(mm)	dY(mm)	dZ(mm)	dYaw °	dPitch °	dRoll °
T5	1.2	0.9	-25.8	-0.2912	-0.4240	0.0387
T7	-0.4	-1.4	-26.1	-0.2951	-0.4266	0.0541
T8	-0.9	-1.4	-26.1	-0.2853	-0.4180	0.0453
T9	-1.1	-1.4	-26.4	-0.3317	-0.4263	0.0261
Hydrogen	0.2	1.2	-26.7	0.0596	-0.6423	-0.0069
Hydrogen Rep	0.1	1.2	-26.7	0.0394	-0.6472	-0.0009