



# Jefferson Lab Alignment Group

## Data Transmittal

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**Checked:**

**# :** B1034

### DETAILS:

Data: m:\align\data\prealign\hallb\cerenkov\inf6\060119a\epa4.rpt

The Cerenkov chamber constructed by INFN to replace the existing JLAB sector 6 Cerenkov was originally pre-aligned on the Hall B floor January, 13<sup>th</sup>, 2006. The pre-alignment involved adjusting the new chamber into the CLAS coordinate system, based on toolingball coordinates given to Jefferson Lab's alignment group by INFN. This survey is referenced in data transmittal B1031. The results of the January 13<sup>th</sup> survey showed that adjustments needed to be made to the shims holding the Cerenkov to the support arms. This resulted in a second pre-alignment survey carried out on January 19<sup>th</sup>, 2006. The results the January 19<sup>th</sup> survey are shown below.

The results below show the coordinates in the CLAS coordinate system, with the +Z position following beam downstream, +X being transverse to the beam left, and +Y being up from the ZX plane. The deltas shown are locations. This means that a +Z would be further downstream, a +X would be further to the beam left and +Y would be higher than the ideal Y coordinate. The found standard errors are estimates from our least squares adjustment of the survey. Note that TP5 had been knocked off of the INFN chamber. Units are millimeters.

Target	X (mm)	Y (mm)	Z (mm)
TB1	1207.3	-769.5	4424.0
TB2	57.4	-1432.4	4432.2
TB3	2667.6	-2450.4	3182.2
TB4	2635.8	-2000.2	2806.6
TB5	1538.0	-2667.8	2836.0
TB6	1729.7	-2983.7	3175.2
TB7	802.7	-3536.3	3189.9
TB8	416.8	-3283.6	2813.0
TP1	1652.3	-1013.8	4058.5
TP2	2141.1	-1333.5	3538.5
TP3	1857.2	-1504.8	4142.5
TP4	39.6	-1895.7	4104.3
TP6	364.0	-2353.4	4152.0

- deltas in the beam following system and coordinate standard error (millimeters)

Target	X bfs	Y bfs	Z bfs	X (se)	Y (se)	Z (se)
TB1	-5.0	0.2	-26.6	0.03	0.04	0.02
TB2	-3.6	-2.3	-16.2	0.04	0.04	0.03
TB3	-4.2	-3.9	-19.5	0.02	0.03	0.02
TB4	-3.9	-5.3	-21.1	0.03	0.05	0.03
TB5	-4.5	-4.2	-18.0	0.02	0.03	0.02
TB6	-4.5	-3.2	-17.2	0.02	0.02	0.02
TB7	-4.6	-2.9	-15.6	0.04	0.03	0.04
TB8	-4.9	-3.3	-15.5	0.05	0.03	0.03
TP1	-5.3	-1.0	-26.1	0.03	0.04	0.02
TP2	-5.5	-3.2	-24.7	0.03	0.04	0.03
TP3	-3.9	-0.2	-23.3	0.03	0.04	0.03
TP4	-3.7	-2.4	-16.2	0.04	0.05	0.03
TP6	-3.9	-2.2	-16.1	0.04	0.05	0.04