



Jefferson Lab Alignment Group

Data Transmittal

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Checked: SH

: B1115

DETAILS:

Below are the results from the CNC/region 1 prototype survey performed on June 19, 2007. A right handed coordinate system was established using the CNC table as the XZ base plane/Y origin, and the 1- 3/8" sphere as the XZ origin. The +Z axis is formed from a bisected line between tooling balls 1 through 12 on each side. Values are in millimeters.

TOOLING BALLS:

LOCATION	Z	X	Y	LOCATION	Z	X	Y
R1	86.33	-65.14	198.87	L1	86.36	65.92	198.88
R2	222.41	-135.44	198.76	L2	222.27	136.29	198.79
R3	358.27	-205.99	198.78	L3	358.27	206.77	198.80
R4	494.18	-276.60	198.77	L4	494.15	277.39	198.79
R5	630.12	-347.10	198.74	L5	630.03	348.03	198.77
R6	766.07	-417.56	198.67	L6	765.87	418.68	198.78
R7	901.92	-488.13	198.73	L7	901.67	489.40	198.81
R8	1037.63	-559.03	198.78	L8	1037.46	560.16	198.81
R9	1173.27	-630.10	198.93	L9	1173.21	631.01	198.87
R10	1308.82	-701.29	199.05	L10	1308.87	701.98	199.00
R11	1444.27	-772.65	199.26	L11	1444.26	773.40	199.15
R12	1579.44	-844.48	199.53	L12	1579.42	845.30	199.44

The following offsets are derived from constructing planes on each side plate using the four corners. The values show the amount of bow on the plate at each point. A negative value is inwards.

R1	+0.19	L1	+0.13
R2	-0.52	L2	-0.45
R3	-0.90	L3	-0.96
R4	-1.26	L4	-1.30
R5	-1.71	L5	-1.62
R6	-2.22	L6	-1.91
R7	-2.56	L7	-2.12
AboveR7	-1.88	AboveL7	-1.92
BelowR7	-3.26	BelowL7	-2.36
R8	-2.55	L8	-2.28
R9	-2.35	L9	-2.34
R10	-2.01	L10	-2.25
R11	-1.45	L11	-1.64
R12	-0.35	L12	-0.47

The apex angle from two lines constructed between tooling balls 1 and 12 is 55.1272 degrees.