



## Jefferson Lab Alignment Group

### Data Transmittal

**TO:** D. Kashy

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**FROM:** J. Dahlberg

**Checked:**

**# :** B1028

#### DETAILS:

Below are the results from the fiducial data measured on the Pb bullet shielding. A right handed coordinate system was established with a +Z downstream, a +X to the beam left, and a +Y up. The Z axis is centered on the upstream end of the lead and a mid point constructed between the two ends of the 76.2 mm diameter shaft at the downstream end (excluding the tapered area). As shown below, the upstream fiducials, A and B changed 0.76mm in a positive direction when the extra weight was added and re-fiducialized. This would indicate a drop of 0.45 mm at the upstream end of the lead based on the ratio. The measurement on the lead 706.37 mm downstream from the upstream end is in an area covered with tape and is somewhat approximate.

LOCATION	Z	X	Y	Y (with weight)	DIFF
Fid E	-435.85	-61.49	-488.93	-488.92	+.01
Fid D	-920.62	-57.12	-490.54	-490.30	+.24
Fid C	-1335.19	-53.71	-490.58	-490.17	+.41
Fid B	-1867.67	-305.55	-491.73	-490.99	+.74
Fid A	-1863.16	322.43	-492.03	-491.26	+.77
Upst Pb	-706.37	0.00	0.00	0.00	.00
Dnst Pb of upst section	-263.57	-0.33	1.58	1.56	-.02
706.37mm dnst from upst end	1.87	0.73	0.88	0.71	-.17
Mid point of downstream shaft	940.57	0.00	0.00	0.00	.00
Dnst of tapered end	1003.88	0.02	-0.06	-0.15	-.09