



# Jefferson Lab Alignment Group

## Data Transmittal

**TO:** R. DeVita, S.Stapanyan, B.Miller

**DATE:** 06/22/2018

**FROM:** Kelly Tremblay

**Checked:** SEH

**# :** B1870

### DETAILS:

data: step2b\hallb\fwd\_tag\_hodo\180621a

The forward tagger was surveyed on June 21<sup>st</sup>, 2018. The results are shown below. Three threaded alignment rods were visible to the crew. Other locations were either covered over or not visible with the nose cone attached. The nose cone was not attached during the November 2017 survey (see ref data transmittal B1837).

The table below shows the location of three alignment rods and their ideal location. The second table shows the deltas. Note that a different target was used than the INFN designed target. A prism with a 25.4 millimeter offset from the reference surface, rather than the 10mm designed target (plus holder) from the reference surface was used.

The distance measurement is the distance from the target perpendicular to the beamline.

The origin is the 12G design target location. A positive X is to the left from the design beamline (looking downstream); a positive Y is vertical from the design beam; a positive z is downstream along design beam. Units are millimeters and decimal degrees.

Pin	Found Values					Ideal Values				
	x[mm]	y[mm]	z[mm]	dist[mm]	angle°	x[mm]	y[mm]	z[mm]	dist[mm]	angle°
Pin180	-247.57	-4.02	1901.84	247.60	180.9303	-246.75	0.00	1904.60	246.75	180.0
Pin245	-103.6	-225.06	1900.15	247.76	245.2824	-104.28	-223.64	1904.60	246.75	245.0
Pin295	97.42	-227.34	1899.27	247.33	293.1962	104.28	-223.64	1904.60	246.75	295.0

deltas					
Pin	x[mm]	y[mm]	z[mm]	dist[mm]	angle°
Pin180	-0.82	-4.02	-2.76	0.85	0.93
Pin245	0.68	-1.43	-4.45	1.01	0.28
Pin295	-6.86	-3.71	-5.33	0.58	-1.80

The nose cone was located at the following locations, in the same coordinate system :

	x[mm]	y[mm]	z[mm]	radius [mm]
Upstream	-0.28	0.35	890.7	38.85
Downstream	0.04	-0.08	1725.08	75.28