



Jefferson Lab Alignment Group

Data Transmittal

TO: H. Egiyan, T. Whitlatch

DATE: 26 Oct 2017

FROM: J. Walker

Checked: JCD

: D1825

DETAILS:

Data: 2b\HallID\170918a, Prealign\HallID\Tagger\Goniometer\170915b

Below are the results from the recent surveys on the Tagger goniometer and HD TAC detector. A + roll angle (in degrees), is clockwise looking from upstream, a + pitch angle is cw looking from the beam right, and a + yaw angle is ccw looking from above.

TAC:

The TAC XYZ coordinates are to the upstream face (tooling ball block subtracted out).

	X(M)	Y(M)	Z(M)	PITCH	YAW	ROLL
IDEAL	80.00000	104.70000		0.000°	0.000°	0.000°
SET	80.59998	104.70003	414.40839	-0.063°	0.043°	0.071°
REPEAT	80.59987	104.70008	414.40862			

GONIOMETER:

Offsets below are from ideal machine coordinate X 80.00000, Y 104.70000, Z 299.09267

	X(mm)	Y(mm)	Z(mm)	NOTE
X 1	-329.19	-159.02	-44.95	X motor horizontal repeatability with target on vertical stage bolt hole.
X 2	-329.15	-159.06	-44.97	
X 3	-329.16	-159.05	-44.98	
X 4	-329.15	-159.04	-44.98	
X 5	-329.16	-159.05	-44.98	
X	100.22	0.12	-0.07	Horizontal 100mm range measurement.
Y 1	-40.85	-79.89	68.86	Y motor vertical repeatability with target on downstream rX stage bolt hole.
Y 2	-40.93	-79.84	68.86	
Y 3	-40.94	-79.83	68.88	
Y 4	-40.97	-79.84	68.86	
Y 5	-40.99	-79.85	68.87	
Ladder1	-0.01	0.01	-8.72	Foil ladder screw position.
Ladder2	-0.02	-0.01	15.68	Diamond ladder screw position.
Foil Tgt	-0.05	0.00	-8.01	Circle defined from 4 concentric bolt holes
Pitch Motor	rY -0.027°	rZ 0.036°		
Yaw Motor	rX 0.034°	rZ 0.107°		
Roll Motor	rX -0.002°	rY -0.048°		