



Jefferson Lab Alignment Group

Data Transmittal

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Checked:

: A1902

DETAILS:

M:\align\DATA\Step2A\HALLA\APEX\190124A

Below are the results of the Apex target alignment. Coordinates are relative to the ideal target center and in a beam following system. A positive X is beam left, positive Y is up and a positive Z is downstream. The Z origin of the Apex target is defined by the midpoint between the upstream faces of the Up Hole and Down Hole. Values are in millimeters and degrees.

Because of the yaw angle introduced by the vertical motion of the target ladder, it was decided to set the Tungsten target parallel to beam.

	Beam Following System (MM AND DEGREES)					
	X	Y	Z	Rx(Pitch)	Ry(Yaw)	Rz(Roll)
UP_HOLE	1.07	0.05	-320.04	-0.0112	0.1502	-0.0317
UP_HOLE_REPEAT	1.08	0.12	-320.04	-0.0237	0.1609	-0.0467
DOWN_HOLE	-0.79	-0.34	330.05	-0.0281	0.1720	-0.0318
OPTICS_UP	-0.07	0.01	-5.06	-0.0215	0.1687	-0.0486
OPTICS_MIDDLE	-0.04	0.28	-5.03	-0.0209	0.1492	-0.0329
OPTICS_DOWN	-0.04	-0.07	-5.03	-0.0245	0.1292	-0.0226
W_WIRES	-0.01	0.15	-5.01	-0.0219	0.1022	-0.0273
HOME	-0.04	0.01	-5.03	-0.0167	0.0496	-0.0396
CARBON	0.02	0.15	-5.05	-0.0136	0.0364	-0.0223
TUNGSTEN	0.13	-0.02	-5.13	-0.0058	-0.0114	-0.0166
TUNGSTEN_REP1	0.18	0.00	-5.13	-0.0018	-0.0197	-0.0243
TUNGSTEN_REP2	0.20	-0.05	-5.09	-0.0112	-0.0235	-0.0137
TUNGSTEN_REP3	0.14	0.00	-5.11	-0.0087	-0.0137	-0.0102
VERTICAL DISTANCE FROM HARDSTOP (Limit Switch) TO TUNGSTEN CL = 4.26mm						