



Jefferson Lab Alignment Group

Data Transmittal

TO: S. Malace

DATE: 10/21/2021

FROM: Chris Gould

Checked: SEH

: A2015

DETAILS:

dataM:\align\DATA\Step2A\HALLA\MOLTGT\210819A

The Hall A Moller target and solenoid were surveyed August 18th, 2021. The ideal (designed) coordinates and angles are shown in the first table in meters and degrees relative to the JLab's CEBAF coordinate system.

The as-found table shows the current location in CEBAF system (meters) and the beam following system (BFS) in millimeters. The BFS data shows the as-found position as it follows the beam relative to the ideal position. In the BFS, a positive dx value is to the beam left; a positive dy is above; A positive dz is downstream from ideal. The delta angle are shown in degrees and are the differences (found – ideal) from ideal. The distance from the standard Hall A target is shown.

Positive Yaw angles are counterclockwise about the Y axis viewed from above, positive Pitch angles are clockwise about the X axis viewed from the left and positive Roll angles are clockwise about the Z axis looking downstream.

CEBAF IDEAL DATA						
	Accelerator coords METERS			ideal angles degrees		
	x[m]	y[m]	z[m]	yaw	pitch	roll
MOLSOL	-43.57183	100.02200	-379.19945	142.5000	0.0000	0.0000
MOLTAR	-43.57183	100.02200	-379.19945	142.5000	0.0000	0.0000
Hall A Target	-32.95843	100.02200	-393.03108	142.5000	0.0000	0.0000

FOUND DATA										
	found accelerator coords METERS				BFS [mm]			delta angles degrees		
	x[m]	y[m]	z[m]	to target[m]	dx	dy	dz	dYaw	dPitch	dRoll
MOLSOL	-43.57171	100.02171	-379.19986	-17.4340	0.15	-0.29	0.40	-0.0029	-0.0033	-0.0139
MOLTAR	-43.57577	100.02223	-379.19675	-17.4389	1.48	0.23	-4.55	-0.0333	-0.1092	0.4039