



Jefferson Lab Alignment Group

Data Transmittal

TO: D. Meekins, D. Gaskell **DATE:** 02 Aug 2023

FROM: Elena Balan **Checked:** cg **# :** C2080

DETAILS: M:\align\DATA\Step2A\BSY\3C_12\230622A

The Moller target and Moller Solenoid were surveyed on 22nd of June, 2023. In a beam following coordinate system +x is beam left, +y is above and +z is downstream. A + yaw angle is counterclockwise looking from above, a + pitch is counterclockwise from the beam right, and a + roll is clockwise looking from upstream.

Component	CEBAF Coordinates			Beam Following			Angles [deg.]		
	x[m]	y[m]	z[m]	dx[mm]	dy[mm]	dz[mm]	Yaw	Pitch	Roll
MOLLER_TAR	-110.61941	99.97776	-370.05831	-1.02	-0.24	5.25	-142.3492	-0.1753	0.0017
MOLLER_SOL	-110.62206	99.97805	-370.06016	-0.04	0.06	8.33	-142.4967	0.0269	0.0338

As requested, the position of the Moller target relative to the Moller Solenoid:

Component	Beam Following			Angles [deg.]		
	dx[mm]	dy[mm]	dz[mm]	Yaw	Pitch	Roll
MOLLER_TAR_TO_MOLLER_SOL	-1.00	-0.26	-3.07	0.1465	0.1999	-0.0324

Position of Hole 3 at Home:

	X[mm]	Y[mm]	Z[mm]	
HOLE3	-0.98	27.17	5.33	relative to beam
HOLE3	-0.96	27.15	-2.99	relative to solenoid

Distance between the top two flanges when Hole 3 is at Home: 139.94mm.

