



# Jefferson Lab Alignment Group

## Data Transmittal

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**Checked:**

**# :** A1005

### DETAILS:

Below are the results from the July 12<sup>th</sup> and 13<sup>th</sup> survey of the cryogenic targets. Additionally, the sweeper magnet and slits were located. The ideal cryogenic target center is located upstream of the standard Hall A target by a distance of 800 millimeters. The values are relative to this target center position (except where noted below), with +X to the beam left, +Z downstream and +Y is up. All units are millimeters and decimal degrees. The 20 cm target is located only in Z and with a given yaw location. The 24 cm target has only a yaw location. The target ladder is only located in Z with the yaw and pitch being determined.

The electron and hadron septum sieve slits and large apertures are the locations only, relative to the target center. These locations refer to the centers of the sieve slits and apertures.

The ideal center of the sweeper magnet is located downstream from the target a distance of 350 millimeters. The position of the sweeper is relative to this ideal center.

Component	Z	X	Y	Yaw	Pitch	Roll
Helium Target	0.1	0.0	-0.4	0.018°	-0.041°	0.003°
Hydrogen Target	0.5	-0.1	-0.5	0.119°	-0.107°	0.048°
20 cm target up	-99.3			-0.371°		
20 cm target dn	100.7					
24 cm target				0.045°		
Target Ladder	2.3			-0.336°	-0.259°	
Empty Ladder Cell		-0.1	0.0			
Hadron (right) Septum Slit	794.1	-82.6	0.7			
Hadron Large Aperture	821.7	-85.6	2.1	-5.904°		
Electron (left) Septum Slit	796.3	83.0	0.4			
Electron Large Aperture	821.8	85.9	1.6	5.832°		
Sweeper Magnet	-0.7	0.2	-0.8	0.0643°	0.0805°	0.0894°