



# Jefferson Lab Alignment Group

## Data Transmittal

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**DATE:** 14 Dec 2011

**FROM:** J. Dahlberg

**Checked:**

**# :** A1423

**DETAILS:**

Data: Fiducial\halla\g2p\110906, 111130 ; Step2b\halla\g2p\111206, 111214

Below are the results from the recent survey carried out on the Hall A G2p beam line components. X and Y values are relative to ideal beam center. Z values are relative to ideal Hall A pivot (traditional target). A +X is to the beam left from ideal, a +Y is above, and a +Z is downstream. Values are in millimeters and degrees. Detailed information on the G2p super harps is listed below.

LOCATION	Z	X	Y	YAW	PITCH	ROLL
UPST Harp	-23563	+0.11	0.00			
FT1H00 tgt.	-19956	-0.06	0.09	0.016	-0.011	-0.068
Q1H01bpm	-18651	0.22	-0.53			
Q1H01	-18297	0.04	-0.11			
G2p harp1	-8902	0.05	0.12			
FZ1	-7036	-0.11	0.00	0.001	0.001	-0.005
YAG viewer	-5297	-0.14	0.14			
FZ2	-3783	0.04	-0.03	0.023	0.180	-0.009
G2p bpm1	-1817	0.23	-1.34			
G2p harp2	-1689	0.26	-1.53			
G2p bpm2	-1572	0.42	-0.85			
US tgt. pipe	-946	1.60	-1.29			
Tgt. center	-896					
DS tgt. pipe	-801	2.94	-0.86			
Septum	686	0.17	-0.05	-0.029	-0.017	-0.004

### SUPER HARP DATA

Note: The encoder values are recorded when the wires are centered on the upstream and downstream flanges. The average flange offsets from beam line listed above have to be taken into account separately. Due to backlash in the drive, the readings were always taken when extending the wire into beam from the inside home position.

Also, it should be noted that both harps were disassembled with wires replaced after installation in the beam line and therefore, the accuracy of the encoder values is uncertain.

Upstream harp1:      Inside vertical wire = F141  
                         Middle 45 deg wire = D52F  
                         Outside 45 deg wire = 728E

Downstream harp2:    Inside horizontal wire = FDCE  
                         Middle 45 deg wire = CC4C  
                         Outside vertical wire = A497