



Jefferson Lab Alignment Group

Data Transmittal

TO: S. Stepanyan **DATE:** 06/13/2019

FROM: Chris Gould **Checked:** **# :** B1927

DETAILS: DATA: M:\align\DATA\Step2B\HALLB\HPS_19\190516A
M:\align\DATA\Step2B\HALLB\HPS_19\190613A

Below are the current component positions for the HPS 2019 summer run. The positions are given in the CEBAF Machine coordinates. The downstream SVT locations are calculated based on the observed chamber motion required to align the motor feed through with the pivot rods. The deltas are listed in a beam following system relative to the ideal component location. A positive X is to the beam left, a positive Y is up and a positive Z is downstream. A positive Yaw angle is counterclockwise viewed from above, a positive pitch angle is clockwise viewed from the left and a positive roll angle is clockwise looking downstream.

Magnets	CEBAF IDEAL (M)		
	X	Y	Z
US FRASCATTI	-80.60000	103.35526	-415.57178
PAIR SPEC	-80.68860	103.35526	-417.75288
DS FRASCATTI	-80.60000	103.35526	-419.93398

Summary	MEASURED (M)			BFS (mm)						
	X	Y	Z	X	Y	Z	YAW	PITCH	ROLL	
ELEMENT										
US FRASCATTI	-80.60000	103.35524	-415.57373	0.00	-0.02	1.95	0.0075	0.0152	0.0034	
PAIR SPEC.	-80.68907	103.35472	-417.75669	0.47	-0.55	3.81	-0.0719	0.0109	-0.0006	
DS FRASCATTI	-80.60022	103.35521	-419.93743	0.22	-0.05	3.45	0.0000	-0.0201	0.0034	

SVT Tooling Balls	X	Y	Z
HPSSVTA	-80.68848	103.28101	-417.01944
HPSSVTB	-80.56162	103.42957	-417.01949
HPSSVTC	-80.81576	103.42958	-417.01929
Calculated Positions After Chamber Move			
HPSSVTD	-80.68885	103.28107	-418.28318
HPSSVTE	-80.56168	103.42947	-418.28340
HPSSVTF	-80.81572	103.42952	-418.28285

	X	Y	Z	YAW	PITCH	ROLL
HODOSCOPE	-80.59017	103.35417	-418.64343	0.0180	-0.0017	0.0218
Hodo. Tooling Balls						
B	-80.94010	103.59089	-418.64332			
C	-80.44010	103.59067	-418.64350			
D	-80.29801	103.35401	-418.64352			
E. CAL Tooling Balls						
CTOP_A	-80.30088	103.58880	-418.74662			
CTOP_B	-80.30086	103.58874	-418.89669			
CTOP_C	-81.11627	103.58874	-418.74792			
CTOP_D	-81.11642	103.58889	-418.89830			
CBOTT_A	-80.30148	103.12429	-418.74398			
CBOTT_B	-80.30415	103.12434	-418.89293			
CBOTT_C	-81.11878	103.12438	-418.74400			
CBOTT_D	-81.11856	103.12416	-418.89498			