



Jefferson Lab Alignment Group

Data Transmittal

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DATE: 08/31/2021

FROM: Elena Balan

Checked: JAC

: B2002

DETAILS:

M:\align\DATA\Step2B\HALLB\HPS_21\210827A
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The Pair Spectrometer, SVT detector, collimator, Hodoscope, and downstream Frascati magnets were surveyed August 27th, 2021.

The ideal and found coordinates are shown in meters relative to the CEBAF coordinate system. The beam following coordinates (millimeters) are also shown and are described as follows: Positive x is to the beam left from ideal beam looking downstream; Positive y is the amount lower than beamline; negative z is amount upstream from the ideal position.

The angular displacements are shown in degrees. Positive yaw is the counter clockwise rotation about the Y axis; negative pitch is the clockwise rotation about the X axis (physics standard); positive roll is the clockwise rotation about the Z axis.

Note that the Pair Spectrometer (MPS2H01) and the SVT detector are offset by 88.6 mm beam left from the straight ahead beamline.

Please consider that changes have been made for the Hodoscope (HPSHODO) and Collimator (HPSCOL) and additional information will be provided at a later date.

The Faraday Cup was surveyed on May 18th 2017.

	CEBAF Ideal		
	X[m]	Y[m]	Z[m]
MPS2H01	-80.68860	103.35526	-417.75288
HPSHODO	-80.60000	103.35526	-418.61469
HPSCOL	-80.60000	103.35526	-414.13880
FRASC2	-80.60000	103.35526	-419.93398
FRASC1	-80.60000	103.35526	-415.57178
SVTPRS	-80.68860	103.35526	-417.75288

	CEBAF measured			Beam Following			yaw[deg]	pitch[deg]	roll[deg]
	X[m]	Y[m]	Z[m]	dz[mm]	dx[mm]	dy[mm]			
MPS2H01	-80.68847	103.35511	-417.75361	0.73	-0.13	-0.15	0.00286	0.01547	-0.00286
HPSHODO	-80.58972	103.35484	-418.64026	25.57	-10.28	-0.42	-0.02435	0.00945	-0.00201
HPSCOL	-80.59987	103.35523	-414.13761	-1.19	-0.13	-0.03	-0.00430	-0.00888	-0.00315
FRASC2	-80.60001	103.35522	-419.93374	-0.24	0.01	-0.04	0.00315	-0.00201	0.00029
FRASC1	-80.60008	103.35530	-415.57196	0.18	0.08	0.04	0.00773	-0.00115	0.01318
SVTPRS	-80.68864	103.35528	-417.75502	2.14	0.04	0.02	-0.00544	0.00372	0.00430
IFY2H04 (FaradayCup)	-80.59360	103.35464	-431.25666		-6.41	-0.63			