



# Jefferson Lab Alignment Group

## Data Transmittal

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Checked:

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### DETAILS:

Below are the results from the Hall A NaI detector survey located in the left spectrometer hut. The coordinate system was established off the top face of the VDC chamber and then pitched 45 degrees to follow the detector stack. The four fiducial points on the VDC were used to center the coordinate system in the X and Y direction. The Z direction is centered on the top face of the VDC chamber. The values from both the original coordinate system normal to the VDC top surface and the rotated system are listed. A +X is to the beam left, a +Y is up, and a +Z is downstream. Values are in millimeters.

### COORDINATE SYSTEM 0° FROM VDC DOWNSTREAM FACE

Location	Z	X	Y
NaI upstream bottom beam right corner	936.5	-385.1	-2313.4
NaI upstream bottom beam left corner	933.5	377.1	-2305.5
NaI upstream top beam right corner	2400.8	-395.1	-814.4
NaI upstream top beam left corner	2397.9	367.1	-806.5
NaI upstream centerline	1667.2	-9.0	-1559.9
VDC fiducial A	7.9	-303.9	0.0
VDC fiducial B	7.9	304.1	0.0
VDC fiducial C	7.9	0.0	-1219.1
VDC fiducial D	7.9	0.0	1219.1

### COORDINATE SYSTEM ROTATED 45° FROM VDC DOWNSTREAM FACE

Location	Z	X	Y
NaI upstream bottom beam right corner	2298.0	-385.1	-973.6
NaI upstream bottom beam left corner	2290.3	377.1	-970.1
NaI upstream top beam right corner	2273.5	-395.1	1121.8
NaI upstream top beam left corner	2265.9	367.1	1125.2
NaI upstream centerline	2281.9	-9.0	75.8
VDC fiducial A	5.6	-303.9	5.6
VDC fiducial B	5.6	304.1	5.6
VDC fiducial C	867.7	0.0	-856.5
VDC fiducial D	-856.5	0.0	867.7