



Jefferson Lab Alignment Group

Data Transmittal

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Checked:

: C1238

DETAILS:

Data: Step2b\HALLC\Hks_Hes...(see below)

Below are the results of the HKS/HES survey carried out during the months of July and August, 2009. A +X (in millimeters), is to the beam left from ideal, a +Z is downstream, and a +Y is above. A +yaw angle (in degrees), is counter clockwise looking from above, a +pitch is ccw looking from the beam right, and a +roll is cw looking from upstream. Note that the target and HKS collimator calibrations (DT_C1234, DT_C1231), are relative to the splitter centerline, and the HES collimator (DT_C1232) is relative to the HES Q1 centerline. For values relative to ideal beam center, these calibration surveys would need to be corrected for the splitter and Q1 offsets shown below. Also, the HES detectors were surveyed in using the dipole fiducials, therefore, they are relative to the dipole centerline. The HKS and HES hodoscope Z values are from the downstream of the dipole steel.

LOCATION	Z	X	Y	YAW	PITCH	ROLL	DATA
SPLITTER	0.46	0.49	-0.91	-0.028	-0.033	0.011	090805a
HES Q1	0.83	-0.02	0.40	-0.002	-0.065	0.000	090805b
HES Q2	1.31	-0.03	-0.54	-0.020	-0.070	0.006	"
HES dipole	0.04	-0.16	-1.59	-0.002	0.043	-0.013	"
HES Det. 1	-0.05	0.17	0.38	0.011	-0.016	-0.006	090702a
HES Det. 2	0.02	0.06	-0.26	0.002	0.009	-0.003	"
HES Hod1 frame	1794.7	0.4	-0.3	0.025		0.033	090713a
HES Hod2 frame	2094.5	0.4	0.3	0.019		0.005	090728a
HKS Q1	-0.30	-0.11	-1.45	-0.004	0.036	0.028	090805b
HKS Q2	-0.78	-0.67	-1.05	-0.001	0.020	0.020	"
HKS dipole	0.18	-0.72	-0.65	0.006	0.002	0.005	"
HKS Det. 1	0.08	0.00	0.09	0.100	-0.057	0.007	090529a
HKS Det. 2	0.03	-0.09	0.09	0.000	-0.008	0.000	"
HKS 1X frame	3103	-57	0	-0.04		0.07	HKSHUT
HKS1Y frame	3260	-48	2	0.07		0.03	"
HKS AC1	3536	7	-4			0.11	"
HKS AC2	3854	-67	0			0.02	"
HKS AC3	4172	-139	-1	0.11		0.03	"
HKS 2X frame	4589	-80	1	0.04		0.12	"