Jefferson Lab Alignment Group

Data Transmittal

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DETAILS:

Below are the results of the Hall A He3 target and compass surveys performed prior to and after the E97110 run during May 2003. The deltas shown represent the offset from ideal (in mm and degrees) of the target center based on the fiducials. A positive X indicates that the point is located to the beam left, positive Y is up, and positive Z is downstream. A positive pitch is counter-clockwise looking from the beam right, and a positive yaw is clockwise looking from above. The compass angle deltas are offsets from the magnet field direction, (in degrees), which are based on the incoming beam line. They are listed sequentially as surveyed in the field.

TARGET MEASUREMENTS PRIOR TO RUN

TARGET	Del Z	Del X	Del Y	Pitch	Yaw
Tgt. warm.	-0.64	0.80	0.01	0.05	0.23
Ref. tgt. warm.	0.32	-0.08	106.26	0.09	-0.02
Tgt. warm repeat.	-0.60	0.49	-0.00	0.04	0.14
Ref. tgt. warm repeat.	0.40	-0.07	106.04	0.03	-0.02
Ref. tgt. cool.	0.21	-0.45	106.40	-0.06	0.04
Tgt. cool	-0.86	0.29	0.51	-0.03	0.26

TARGET MEASUREMENTS AFTER RUN

TARGET	Del Z	Del X	Del Y	Pitch	Yaw
Ref. tgt. warm.	0.57	-0.35	105.26	0.08	-0.22
Tgt. warm.	-0.43	-0.23	-0.83	0.08	0.06
Tgt. cool.	-0.44	0.05	-0.83	-0.04	-0.01
Ref. tgt. cool.	0.51	-0.14	105.46	-0.08	-0.30

COMPASS MEASUREMENTS PRIOR TO RUN

ORIENTATION	Delta
parallel to beam	0.4752
“	-0.1038
“	0.1022
perpendicular to beam	-0.2881
“	0.6737
“	1.0097
“	0.6479
“	-0.0975
“	-1.0425
“	-1.0299
“	-0.4381
“	-0.3583
“	-0.2591
“	0.1432

COMPASS MEASUREMENTS AFTER RUN

ORIENTATION	Delta
parallel to beam	0.9967 (day one)
“	0.2914
perpendicular to beam	0.3387 (day two)
parallel to beam	0.2818
“	0.3628 (coils warm)
“	0.3382