



Jefferson Lab Alignment Group

Data Transmittal

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data: inspection\Inlc\110913A

Below are the delta values between the waveguide flanges on the R100 cryomodule and the waveguide flange roof locations in cryo-slots NL22, NL23, NL24, NL25 and NL26. The first set of data shows the x,y,z coordinates of the R-100 waveguide flange centers located in its ideal position in NL22. The values are in meters, relative to the CEBAF coordinate system (0,0,0 at the center of the accelerator). The center of the cryomodule flanges are based on the outside flange, minus the 1/4" plastic cover.

The remaining 5 sets of data show the as-found roof locations (X,Y,Z in meters) of the waveguide flange coordinates in the CEBAF system. The deltas (dX, dY, and dZ in millimeters) are the distance from the ideal R-100 flanges to the as-found roof flanges. The roof locations are based on the center of the waveguide flange, minus the 1/4" metal cover. The deltas (dx/dy/dz) are in millimeters with the coordinate differences for a +dX being to the beam left, looking downstream, a +dY being the distance from the cryomodule's port to the roof port and a +dZ being downstream, following beam trajectory.

R100 - Flange	X (m)	Y (m)	Z (m)
1	79.89110	99.99630	41.40137
2	79.89010	99.99600	42.40307
3	79.89120	99.99540	43.40247
4	79.89120	99.99650	44.40337
5	79.89180	99.99600	44.53767
6	79.89130	99.99780	45.54037
7	79.89120	99.99800	46.53867
8	79.89090	99.99930	47.53897

Roof NL22	X (m)	Y (m)	Z (m)	dX (mm)	dY (mm)	dZ (mm)
1	79.65738	102.20996	43.32710	-233.7	2213.7	1925.7
2	79.66881	102.20996	43.51527	-221.3	2214.0	1112.2
3	79.90169	102.20952	43.33357	10.5	2214.1	-68.9
4	79.88438	102.00504	43.51909	-6.8	2008.5	-884.3
5	79.89785	102.00368	45.23846	6.1	2007.7	700.8
6	79.91285	102.20632	45.42331	21.6	2208.5	-117.1
7	79.67744	102.20673	45.22096	-213.8	2208.7	-1317.7
8	79.68026	102.20601	45.40413	-210.6	2206.7	-2134.8

Roof NL23	X (m)	Y (m)	Z (m)	dX (mm)	dY (mm)	dZ (mm)
1	79.67212	102.20694	52.93530	-219.0	2210.6	1933.9
2	79.68267	102.20557	53.11782	-207.4	2209.6	1114.7
3	79.90581	102.20580	52.93240	14.6	2210.4	-70.1
4	79.90878	102.00099	53.11483	17.6	2004.5	-888.5
5	79.90113	102.00542	54.83853	9.3	2009.4	700.9
6	79.89483	102.20787	55.02867	3.5	2210.1	-111.7
7	79.67070	102.21085	54.82570	-220.5	2212.8	-1313.0
8	79.67375	102.20807	55.00792	-217.1	2208.8	-2131.0
Roof NL24	X (m)	Y (m)	Z (m)	dX (mm)	dY (mm)	dZ (mm)
1	79.65814	102.20448	62.55496	-233.0	2208.2	1953.6
2	79.66038	102.20379	62.74036	-229.7	2207.8	1137.3
3	79.88223	102.20493	62.56206	-9.0	2209.5	-40.4
4	79.88592	102.00047	62.73988	-5.3	2004.0	-863.5
5	79.93325	102.00208	64.44697	41.5	2006.1	709.3
6	79.93445	102.20520	64.63472	43.2	2207.4	-105.6
7	79.70512	102.20466	64.43359	-186.1	2206.7	-1305.1
8	79.69946	102.20419	64.62245	-191.4	2204.9	-2116.5
Roof NL25	X (m)	Y (m)	Z (m)	dX (mm)	dY (mm)	dZ (mm)
1	79.67141	102.20837	72.12647	-219.7	2212.1	1925.1
2	79.67400	102.20648	72.31504	-216.1	2210.5	1112.0
3	79.89740	102.20674	72.12000	6.2	2211.3	-82.5
4	79.89343	102.00326	72.30700	2.2	2006.8	-896.4
5	79.86822	102.00244	74.09886	-23.6	2006.4	761.2
6	79.88499	102.20544	74.28597	-6.3	2207.6	-54.4
7	79.64689	102.20700	74.10285	-244.3	2209.0	-1235.8
8	79.65070	102.20628	74.28872	-240.2	2207.0	-2050.3
Roof NL26	X (m)	Y (m)	Z (m)	dX (mm)	dY (mm)	dZ (mm)
1	79.69439	102.20486	81.78197	-196.7	2208.6	1980.6
2	79.67842	102.20552	81.96484	-211.7	2209.5	1161.8
3	79.91859	102.20570	81.76769	27.4	2210.3	-34.8
4	79.90685	102.00262	81.94913	15.6	2006.1	-854.2
5	79.91938	101.99828	83.66797	27.6	2002.3	730.3
6	79.90680	102.20099	83.85171	15.5	2203.2	-88.7
7	79.69754	102.20061	83.65462	-193.7	2202.6	-1284.0
8	79.67518	102.19999	83.83866	-215.7	2200.7	-2100.3