



Jefferson Lab Alignment Group

Data Transmittal

TO: Tim Whitlatch and Brian Carpenter

DATE : Mar 27, 2003

FROM: Chris Gould

Checked:

L849r

Details:

The following results are the inspection of upgrade vacuum vessel NL11 performed the week of March 17, 2003. A right hand coordinate system was established with the central axis running through the ID of the six reinforcing rings. Roll was controlled by an average of all seven tophat flanges. Positive X is to the beam left. Positive Y is up. Positive Z runs downstream with Z = 0 at the face of the upstream reinforcing ring. Values are in inches and degrees.

Reinforcing Rings	Z	X	Y
Upstream Ring (ID = 31.547)	0.00	0.01	-0.08
Upstream Ring (OD = 37.924)	0.00	0.00	-2.35
Ring 2	58.24	0.04	0.01
Ring 3	119.73	-0.03	0.08
Ring 4	181.19	-0.05	0.07
Ring 5	242.66	0.02	-0.02
Downstream Ring (ID = 31.547)	301.90	0.03	-0.06
Downstream Ring (OD = 38.013)	301.90	0.02	-2.39

Overall Straightness = 0.16

TopHat Location	//	Z	X	Y
Upstream	0.06	30.58	-18.98	-0.11
TH 2	0.08	69.91	-18.98	-0.02
TH 3	0.04	109.35	-18.96	0.00
TH 4	0.05	151.04	-18.98	-0.02
TH 5	0.06	192.73	-19.02	0.05
TH 6	0.04	232.16	-19.06	0.03
Downstream	0.01	271.50	-19.04	0.06

Vacuum Port (Ref 14)	Radius	Angle	Z to Ring 3	Z to Ring 5
Upstream BL	16.96	44.6°	18.45	
Upstream BR	17.00	45.1°	18.44	
Downstream BL	17.06	45.2°		42.07
Downstream BR	16.93	44.9°		42.08

Ref. 15

BL	17.57	32.0°	50.76
BR	17.57	31.8°	50.78

**Jefferson Lab Alignment Group Data Transmittal
Continued**

Page 2 of 2

Date : March 27, 2003

Transmittal # : DT_L849r

Lockdown Opening	Z to Ring 3	Width	Radius	Angle	Cut
BL	55.92	2.374	15.85	23.0°	18.1°
BR	55.92	2.367	15.73	22.9°	18.1°

Rail Locations

	X	Y
65" From DS Ring	5.54	-14.14
244" Form DS Ring	5.62	-14.19