

Fiducials for BM2 Std. Vac. Chamber

BM2015

Date:

11/12/02

Chamber:

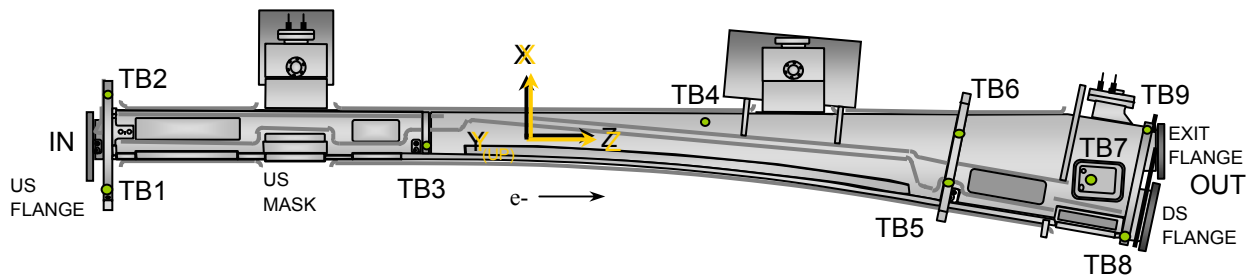
BM2015

Operator(s):

F. Gaudreault
L. Griffin

Notes:

Final survey 1/27/03: MG & CLC



Fiducial Coordinates for BM2 Standard Vacuum Chamber: (inches)

Fiducial	Z	X	Y
TB1	-77.118	-6.228	4.386
TB2	-77.215	7.332	4.382
TB3	-34.878	0.053	4.379
TB4	0.284	3.789	2.390
TB5	34.535	-4.611	4.373
TB6	35.869	2.452	4.373
TB7	53.888	-4.296	2.425
TB8	58.033	-12.428	2.962
TB9	60.952	2.998	2.966

Nominal Deltas For H1 Absorber (TB7)

Z	X	Y
53.888	-4.296	2.425
53.933	-4.302	2.408
-0.045	0.006	0.017

inches inches inches

Source

FINAL

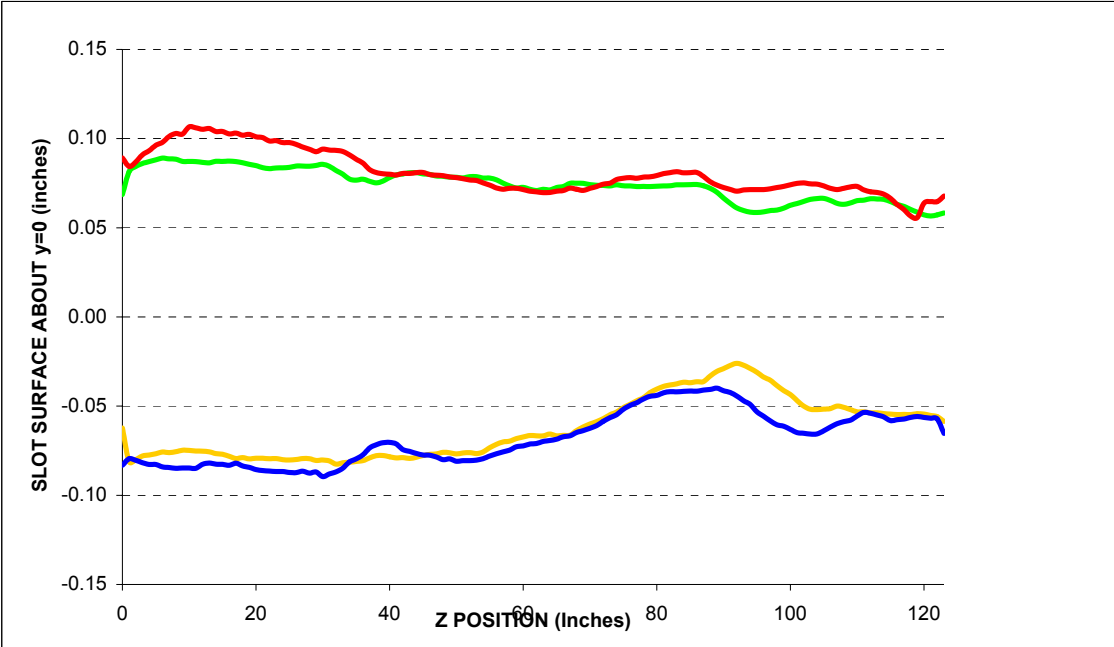
Description:

Fiducial vals based on established chamber datum. Source="Final" indicates final data.

Fiducialization Step: (Traveler Step # 1380)

Slot Calibration	
Ideal	0.511
Meas.	
Delta	-----

Inverted Mouse Slot Calibration	
Ideal	0.511
Meas.	
Delta	-----



BM2015

Step 1: Heights for BM2 Std. Vac. Chamber

Fiducial	Y
TB1	4.386
TB2	4.382
TB3	4.379
TB4	2.379
TB5	4.373
TB6	4.373

inches

Description:
 Fiducial heights of the six tooling balls are based on leveled datum as defined by outside surface measurements. (L1 through L5)

US Flange Position

Step 2: UpStream Flange Postion

US MASK X-Position

-2.582	Measured
-2.667	Nominal
0.085	Delta

inches

US PIN TOP	Z	X	Y
Measured	-80.234	-0.005	2.291
Nominal	-80.229	0.000	2.282
Difference (inches)	-0.005	-0.005	0.009

US PIN BOTTOM	Z	X	Y
Measured	-80.228	-0.005	-2.280
Nominal	-80.229	0.000	-2.282
Difference (inches)	0.001	-0.005	0.002

US Inner Chamber	Z	X	Y
Measured	N/A	-1.404	-0.044
Nominal	N/A	-1.404	0.000
Difference (inches)	N/A	0.000	-0.044

US Flange Position	Plane	From Circle Fit	
	Z	X	Y
Measured	-80.763	-0.010	-0.003
Nominal	-80.763	0.000	0.000
Difference (inches)	0.000	-0.010	-0.003

inches inches inches

US Flange Attitude		
	yaw	pitch
Measured	8.0	-1.2
Nominal	0.0	0.0
Difference	8.0	-1.2

mrad mrad

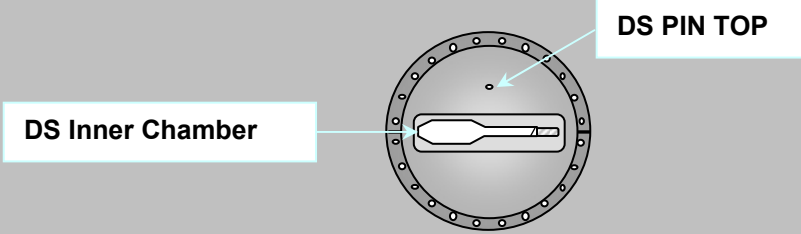
US Flange Diameter	
	DIA
Measured	11.472
Nominal	11.500
Difference	-0.028

inches

Description:
 Measured vs. nominal values for US flange expressed in the FRAME FINAL coordinate system.
 Tol +/- 10mils and +/- 3 mrad. Values in **BOLD** or **RED** are most critical.

DS Flange Position

Step 3: DownStream Flange Position



DS PIN TOP	Z	X	Y
Measured	62.752	1.812	2.304
Nominal	62.859	1.836	2.282
Difference (inches)	-0.107	-0.024	0.022

DS Inner Chamber	Z	X	Y
Measured	N/A	-1.431	-0.026
Nominal	N/A	-1.404	0.000
Difference (inches)	N/A	-0.027	-0.026

DS Flange Position	Plane	From Circle Fit	
	Z	X	Y
Measured	63.295	1.817	0.013
Nominal	63.393	1.836	0.000
Difference (inches)	-0.098	-0.019	0.013
	inches	inches	inches

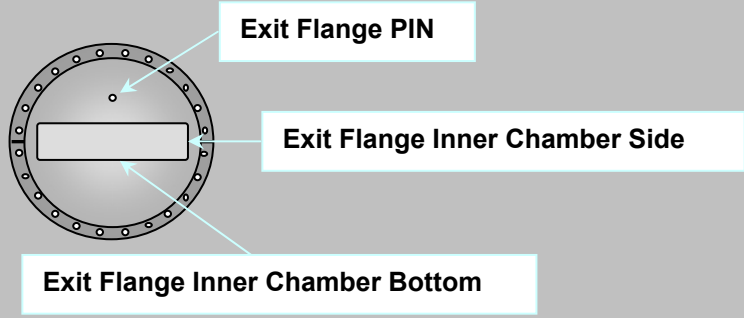
DS Flange Attitude		
	yaw	pitch
Measured	-4.9	-7.1
Nominal	0.0	0.0
Difference	-4.9	-7.1
	mrads	mrads

DS Flange Diameter	
	DIA
Measured	11.468
Nominal	11.500
Difference	-0.032
	inches

Description:
 Meas. vs. nom. values for DS flange expressed in a ROTATED FRAME FINAL coordinate system (10.5882°). Tol +/- 10mils and +/- 3 mrad. Values in **BOLD** or **RED** are most critical.

Exit Port Flange Position (DownStream)

Step 3: DownStream EXIT PORT Flange Position



EXIT FLANGE PIN	Z	X	Y
Measured	63.341	-0.013	1.802
Nominal	63.422	0.000	1.782
Difference (inches)	-0.081	-0.013	0.020

EXIT FLANGE Inner Chamber Side	Z	X	Y
Measured	N/A	-2.465	-0.061
Nominal	N/A	-2.453	0.000
Difference (inches)	N/A	-0.012	-0.061

EXIT FLANGE Inner Chamber Bottom	Z	X	Y
Measured	N/A	-0.361	-0.204
Nominal	N/A	0.000	-0.219
Difference (inches)	N/A	-0.361	0.015

EXIT Flange Position	Plane	From Circle Fit	
	Z	X	Y
Measured	63.888	-0.010	0.013
Nominal	63.956	0.000	0.000
Difference (inches)	-0.068	-0.010	0.013
	inches	inches	inches

EXIT FLANGE Attitude		
	yaw	pitch
Measured	0.2	-3.6
Nominal	0.0	0.0
Difference	0.2	-3.6
	mrاد	mrاد

EXIT FLANGE Diameter	
	DIA
Measured	9.472
Nominal	9.500
Difference	-0.028
	inches

Description:

Meas. vs. nom. values for exit flange expressed in the FRAME FINAL coordinate system.
Tol +/- 10mils and +/- 3 mrad. Values in **BOLD** or **RED** are most critical.

Final Fiducial Coordinates for BM2 Standard Vacuum Chamber

Final: *Fiducial Coordinates for BM2 Std. Vac. Chamber*

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Fiducial values based on established chamber datum.

