Mott Collimator Summary

Coordinates:

- Both Mott chamber flanges have 4 machined fiducials
- Six (2 up and 4 down) accessible and define cylindrical chamber coordinates

Measurements:

- Surveyed 3 times in June.
- First 2 attempts used a long probe to reach into chamber
- Large > -0.5mm vertical suggested possible systematic sag
- Asymmetrical measurements (from left or right) validated systematic of long probe
- Final attempt used a short probe (made possible by removing Al sleeve)

Results: (-10.972 or -11.136) ???

- DS face is (-10.929 +/- 0.003)" upstream of target port (-11.086" of target)
- Collimator is well positioned transversely

PARAMETER	BEAM UP			BEAM DOWN			BEAM LEFT			BEAM RIGHT			BEAM CENTER		
	X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z
SHORT ARM (IN)	0.002	1.434	-10.930	0.005	-1.436	-10.928	1.439	0.001	-10.933	-1.428	-0.002	-10.926	0.004	-0.003	-10.929
DESIGN (IN)	0.000	1.425	0.000	0.000	-1.425	0.000	1.425	0.000	0.000	-1.425	0.000	0.000	0.000	0.000	0.000
SHORT-DESIGN (IN)	0.002	0.009	-10.930	0.005	-0.011	-10.928	0.014	0.001	-10.933	-0.003	-0.002	-10.926	0.004	-0.003	-10.929
SHORT-DESIGN (MM)	0.0508	0.2286	-277.622	0.127	-0.2794	-277.571	0.3556	0.0254	-277.698	-0.0762	-0.0508	-277.52	0.1016	-0.0762	-277.597

X (5 points) [mm]	0.112	0.157
Y (5 points) [mm]	-0.030	0.184
ROLL (UD) [deg]	0.05989	
ROLL (LR) [deg]	0.05995	

Each measurement has 0.003" or 0.076mm uncertainty, so sqrt(5)*0.076 = 0.170 very agreeable w/ scatter

Mott Target and Vacuum Status

Target:

- Danny Machie is updating ladder drawing with only circular holes and designing a viewer adapter

- Next…
  - Update collimator on drawing
  - Verify we're [still] happy with targets 0.157" downstream of target port CL
  - Discuss new stepper motor w/ John
  - Once final ladder in hand, arrange to fiducalize target positions to encoder

Vacuum:

- Jim, Sam and I re-assembled chamber today w/ target blank

- Next…
  - Slow pumpdown, get IP on tomorrow, verify no leaks