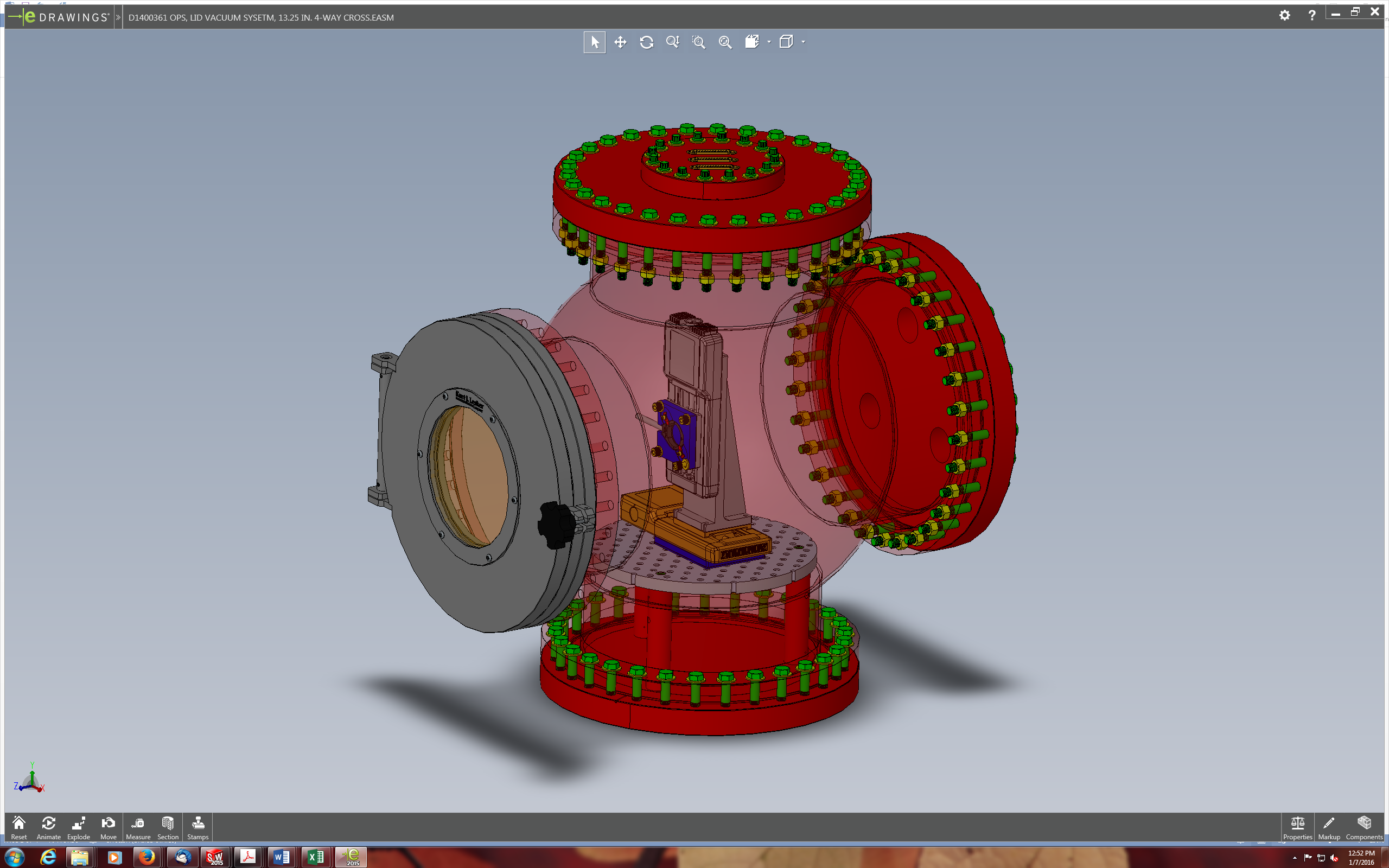
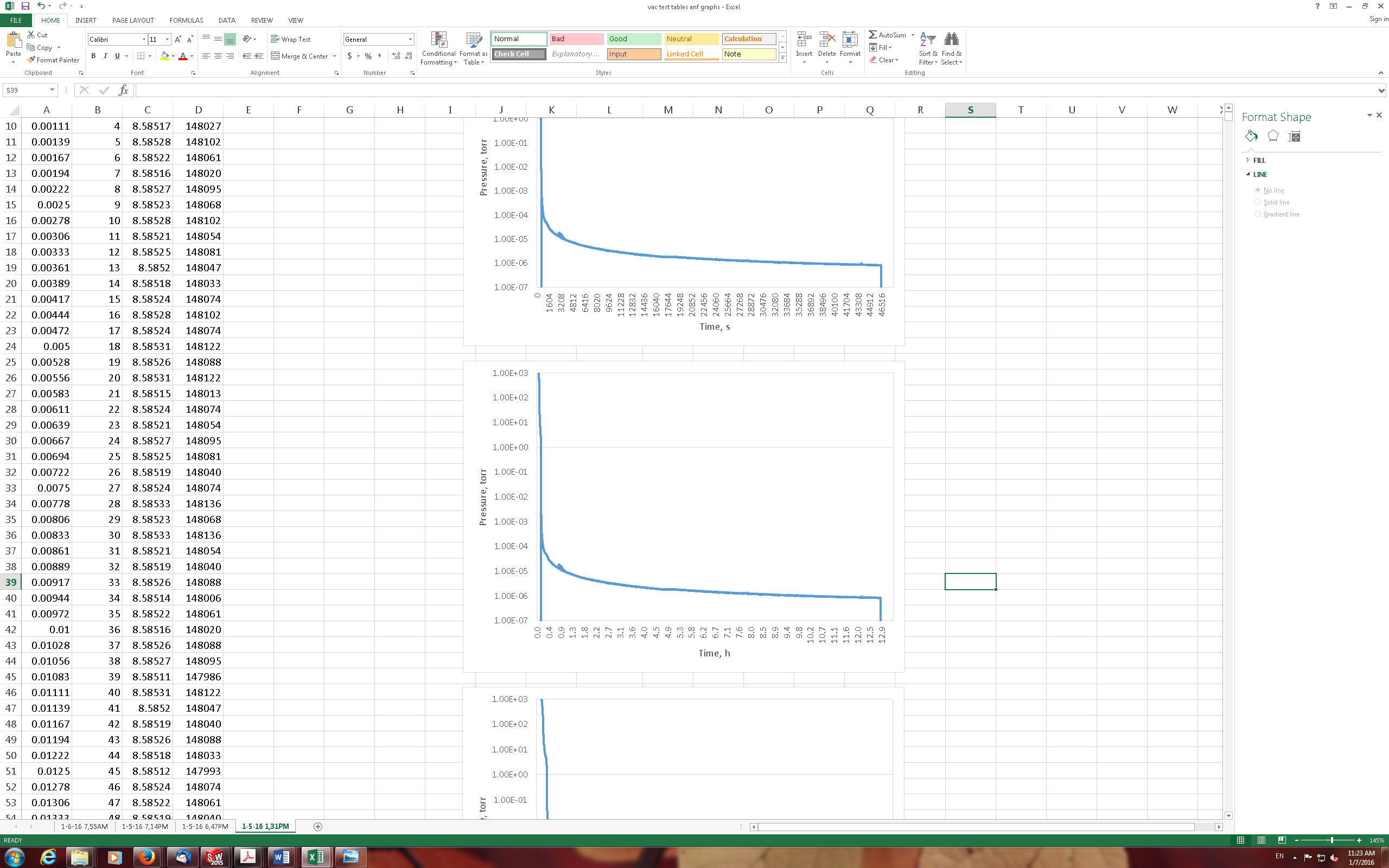
LIDT Logboock

Jan 2016 –



# Vacuum test 5 Jan 2016



Excel tables: F:\Alena\LIDT\Vacuum test\Jan 5\vac test tables anf graphs

To do:

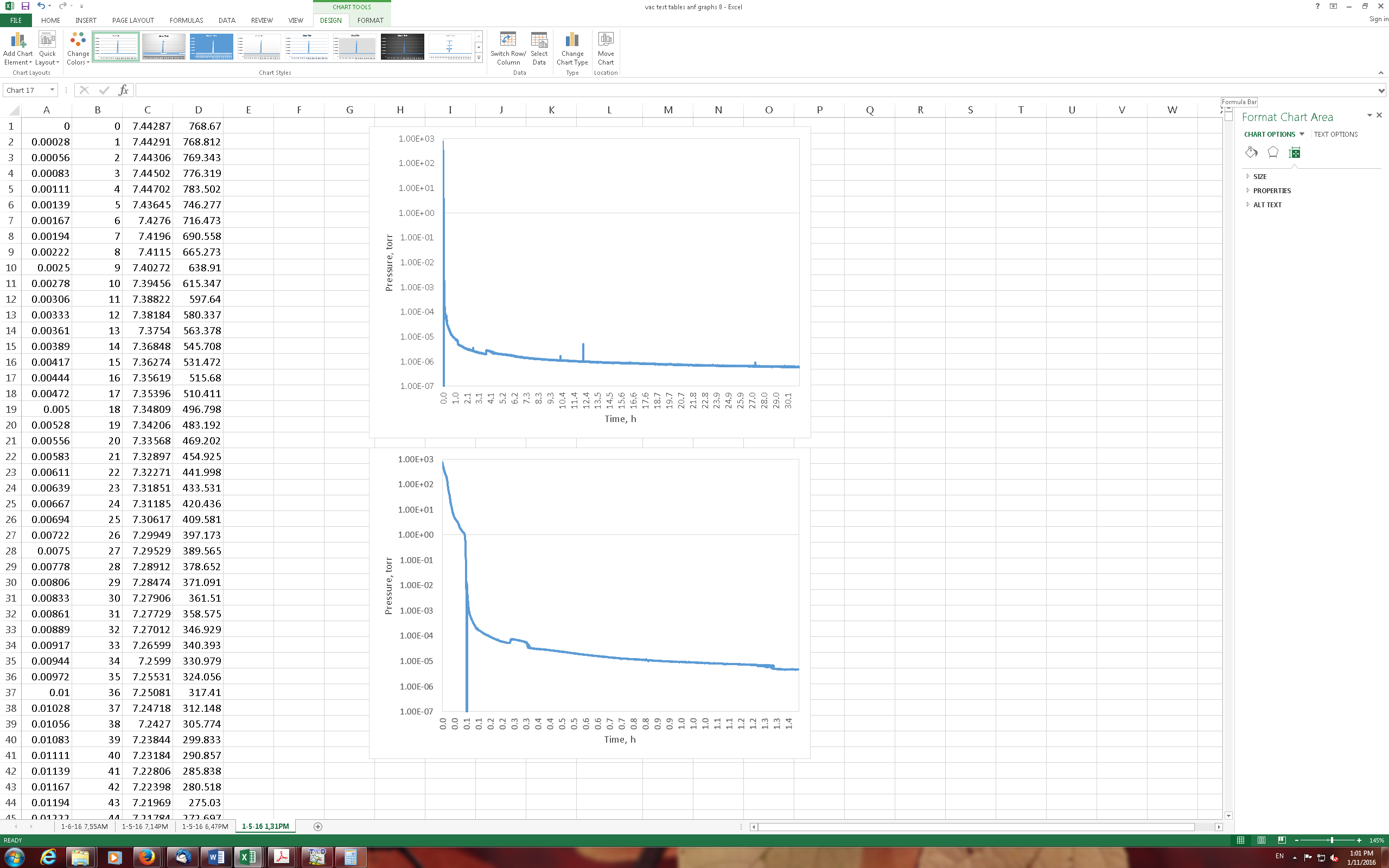
* Racks for the controllers
* Mount the gauge
* Final vacuum test with N and a venting valve

# Pump line from 5 Jan:

# F:\Alena\LIDT\Vacuum test\WP_20160106_08_04_23_Pro.jpg

1. Roughing pump on
2. Turbo on at e-1 torr
3. CCG turn on within 20 sec
4. E-5 reaches within an hour

# Vacuum test with new gauge controller



Start: Friday about 5 PM Jan 8

Pressure on Saturday 1:53 PM is 1.1\*10^-6 torr

Pressure on Monday morning 7:30 AM is 5.8\*10^-7 torr

Pressure on Jan 19



# Optical layout Jan 19:

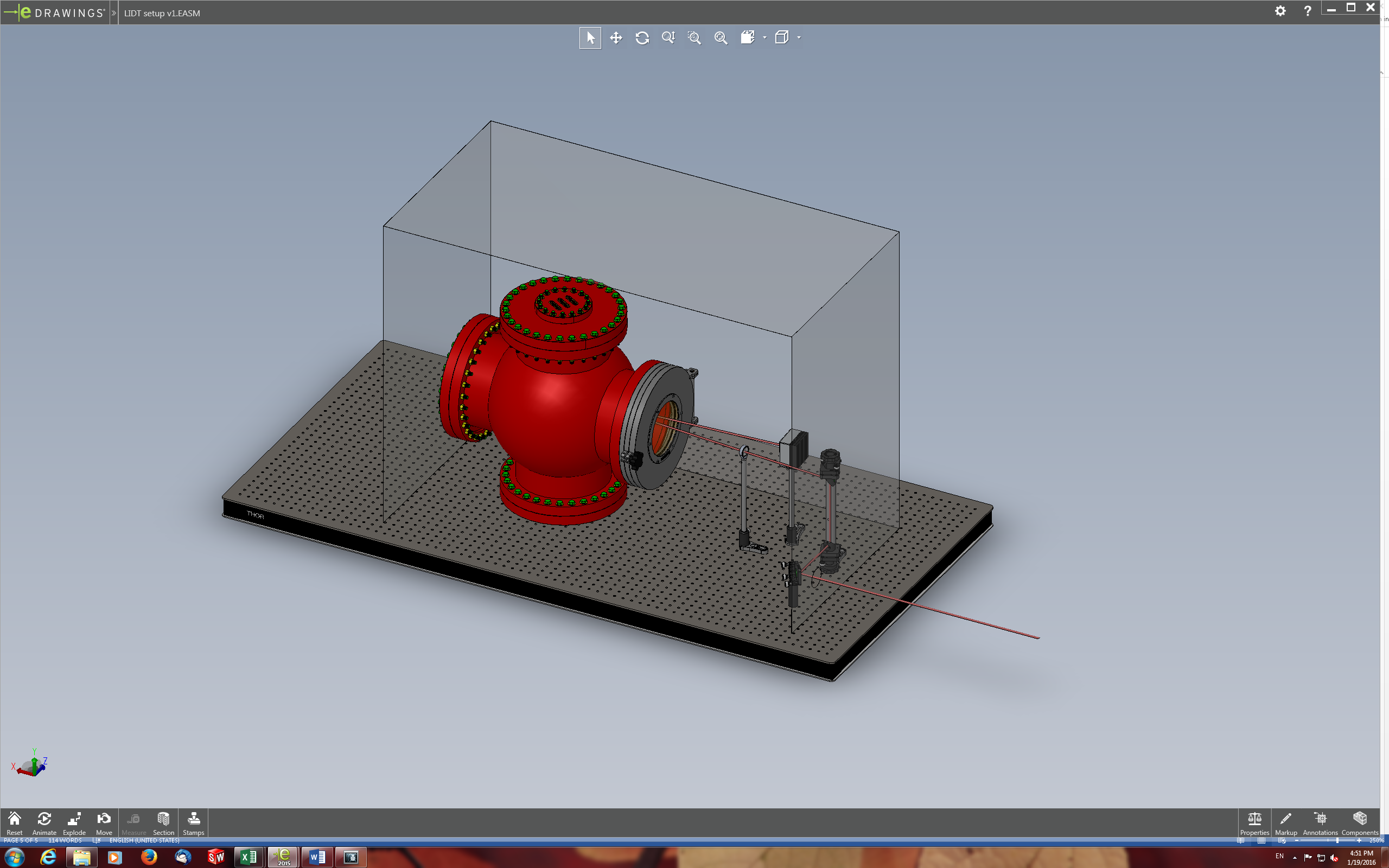
Incident angle on the target: 4 degrees

Beamdump from Steve

Periscope from Liyuan

Rails: one from Bob, one from Liyuan

Additional board from Calum



Need to buy 10 inch rods and clamps, the rest is from Bob

# Status Jan 20:

Set at is taken a part, ultrasonic cleaned. Baking started at 3PM until Friday noon.

# Status Jun 28:

Laser training. Tutorial how to turn the laser on and of below:

Turn the key, wait, press the green button, wait, press “emission”, press the red button on the screen, at first choose 10% intensity. Check the laser beam, make sure it is dumped at the end, and increase the intensity if needed.

To switch off the laser first put the intensity down to 0%, press the “emission” button, turn the key.

# Status March 03:

Pump line upgraded:



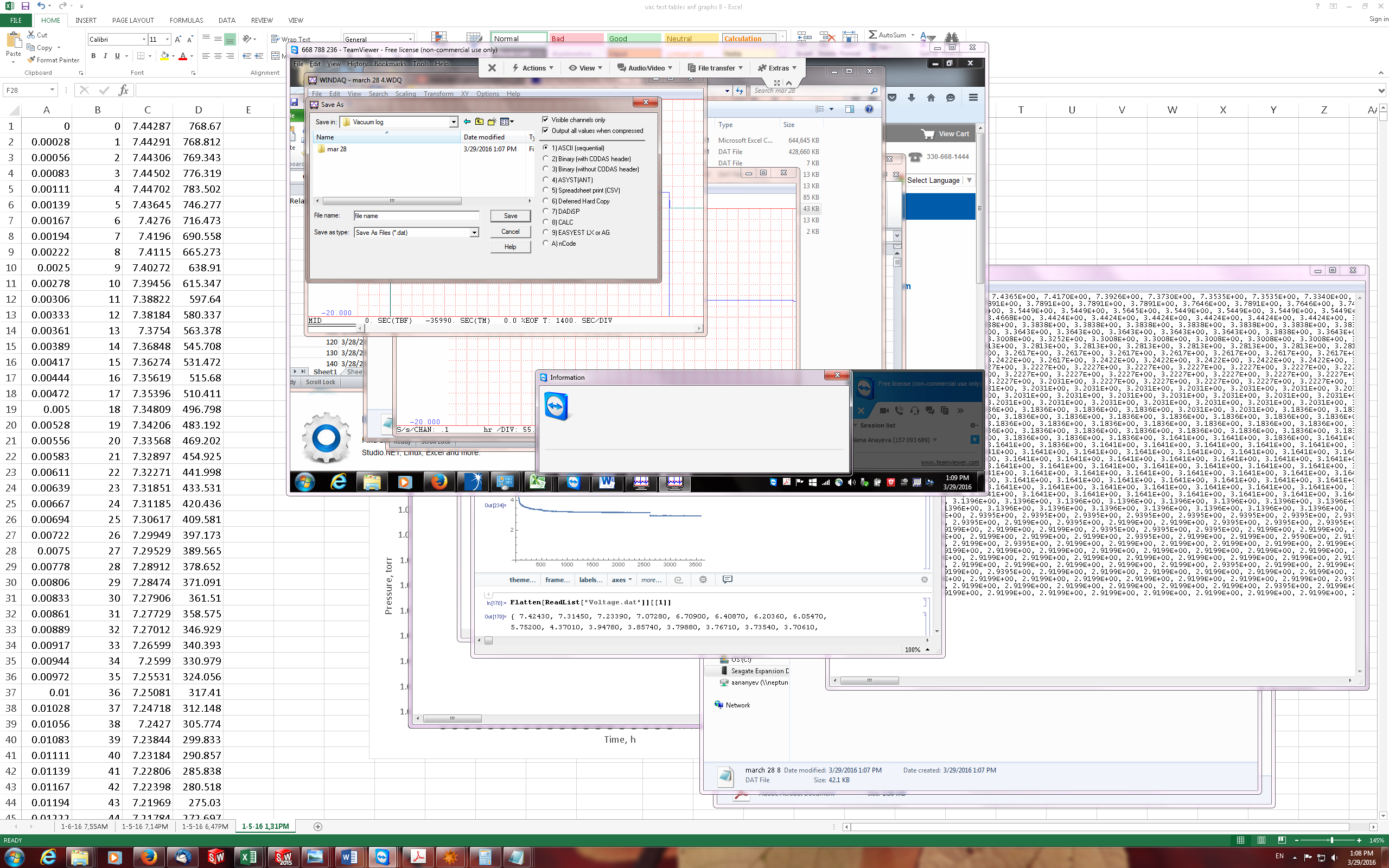
Exchanged the roughing pump, shorten the pump line after turbo. Vacuum test started at lunch time Wednesday, pressure in an hour 1\*10-^5 tor, next morning 8 10^6, Friday 5.8 10^-6 torr. Ok for measurements.

# Status March 23:

Exchanges the viton ring on the door. Big improvement on vacuum. Pressure over the night:



How to save ASCII from DATAQ (compatible with Mathematica):



File->Save as->

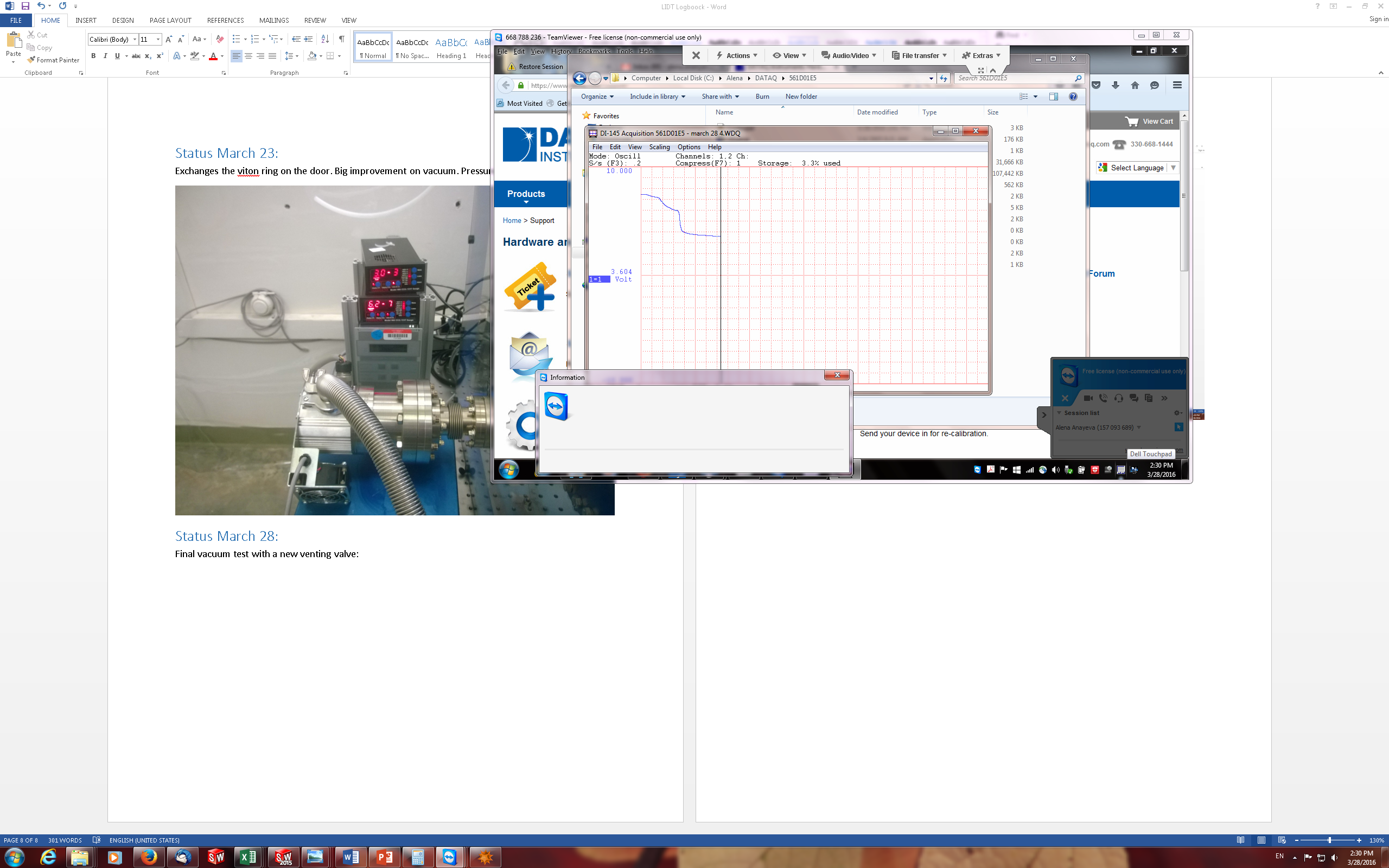
File name: as \*\*\*.dat

Save as type: All files

Chose ASCII -> mark both things on the right upper corner

# Status March 28:

Final vacuum test with a new venting valve:

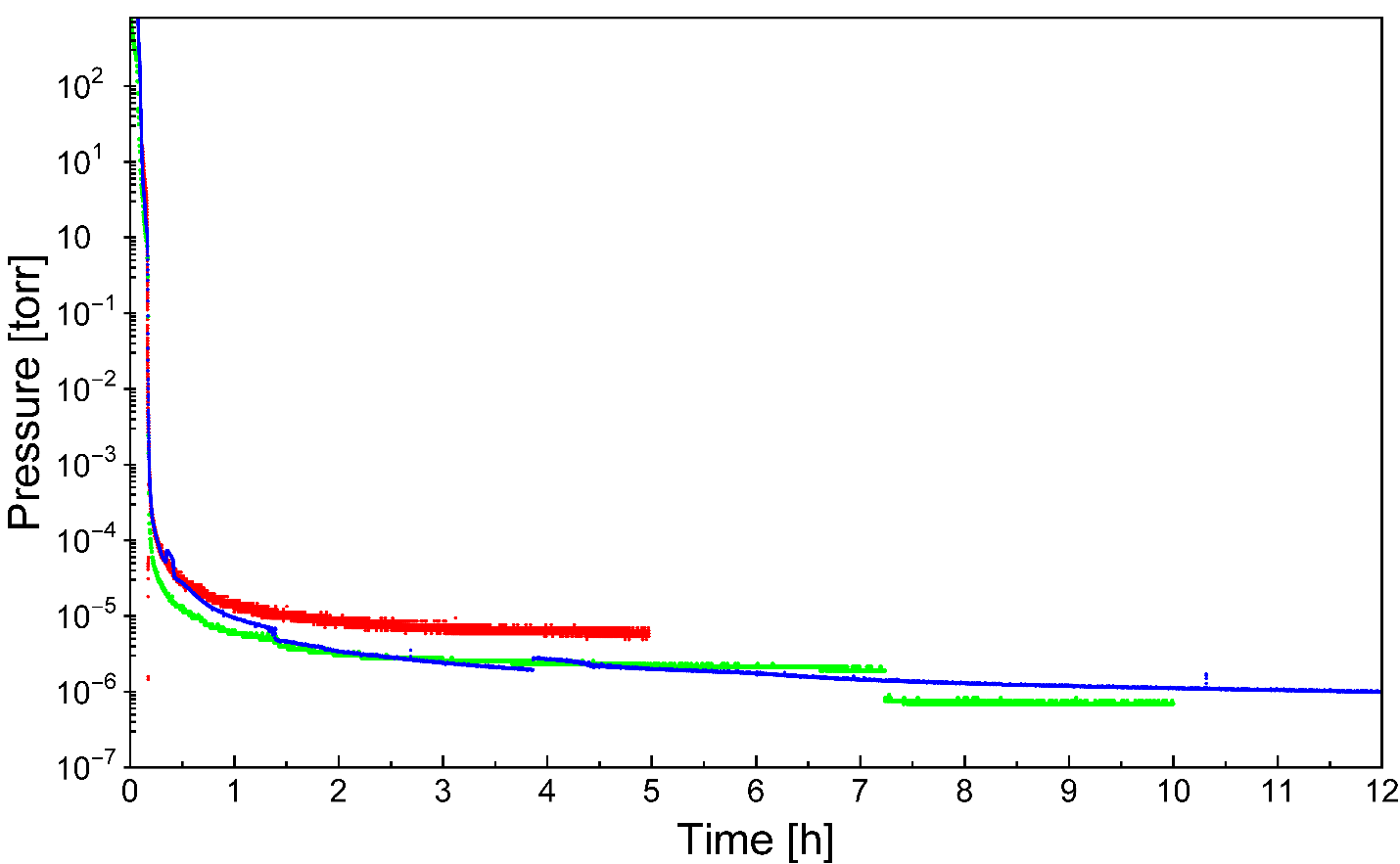


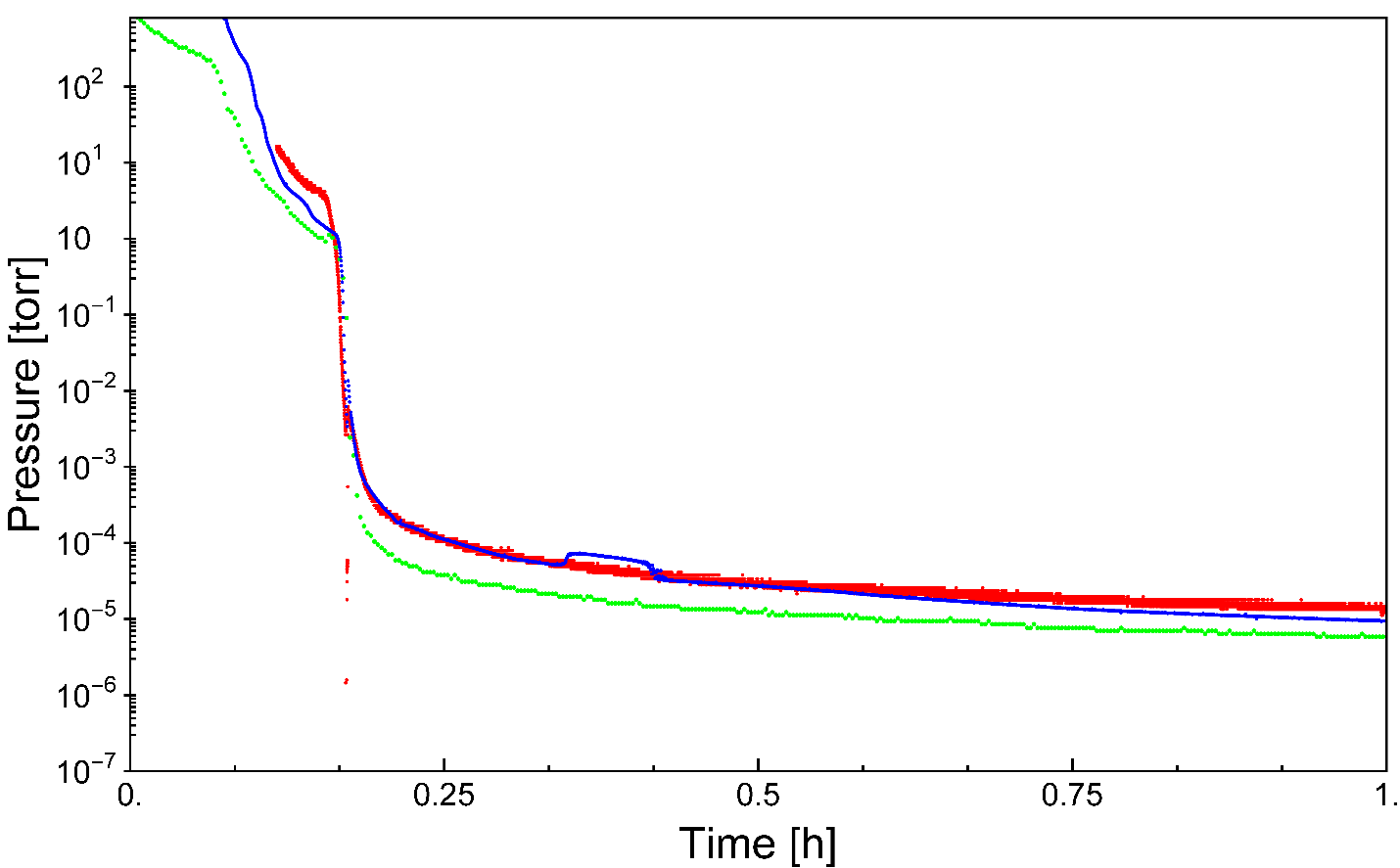
Current value

TeamViewer monitoring. Voltage curve in ch1. Sample rate 0.2 for two channels (0.1 per channel) -> every 10 sec

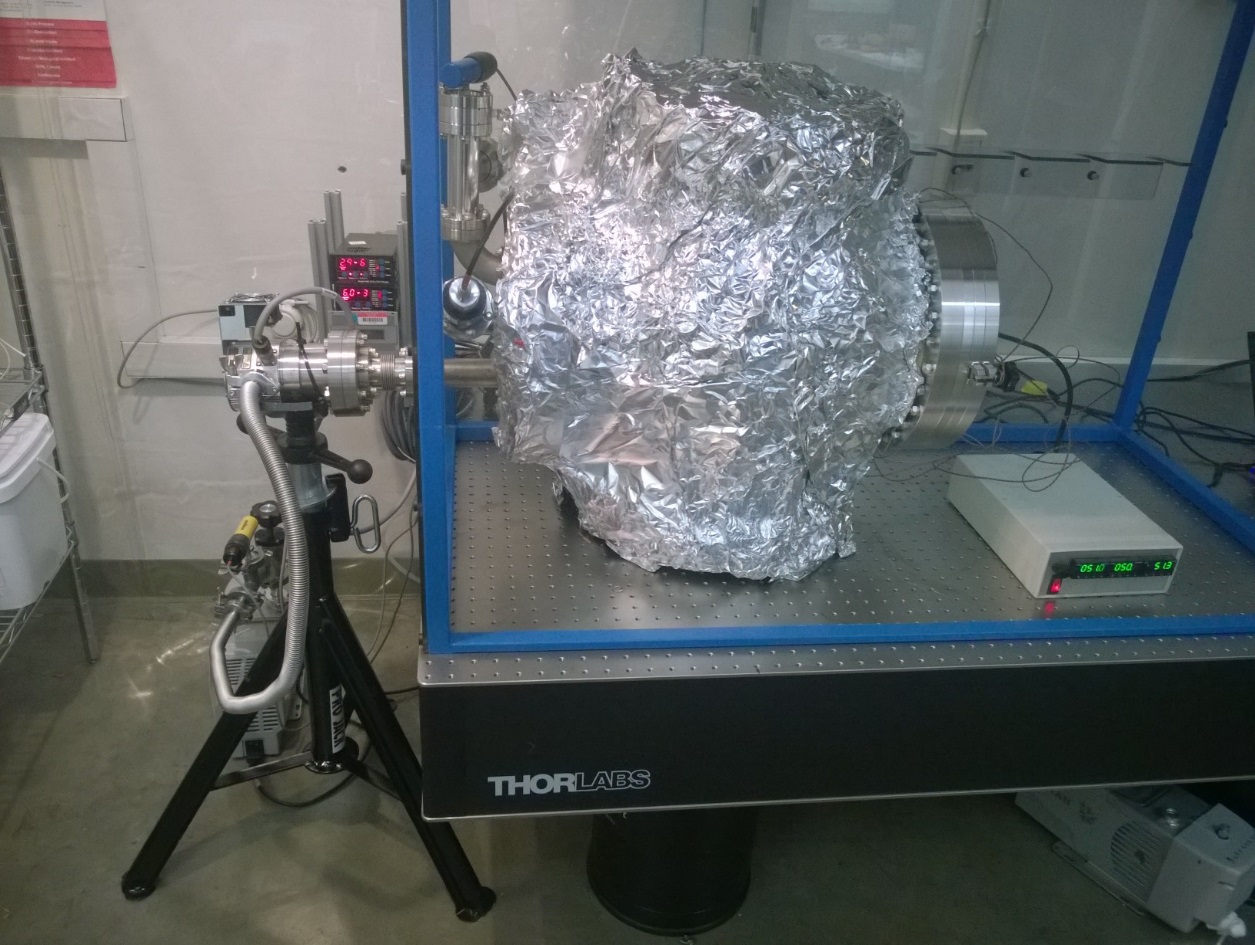
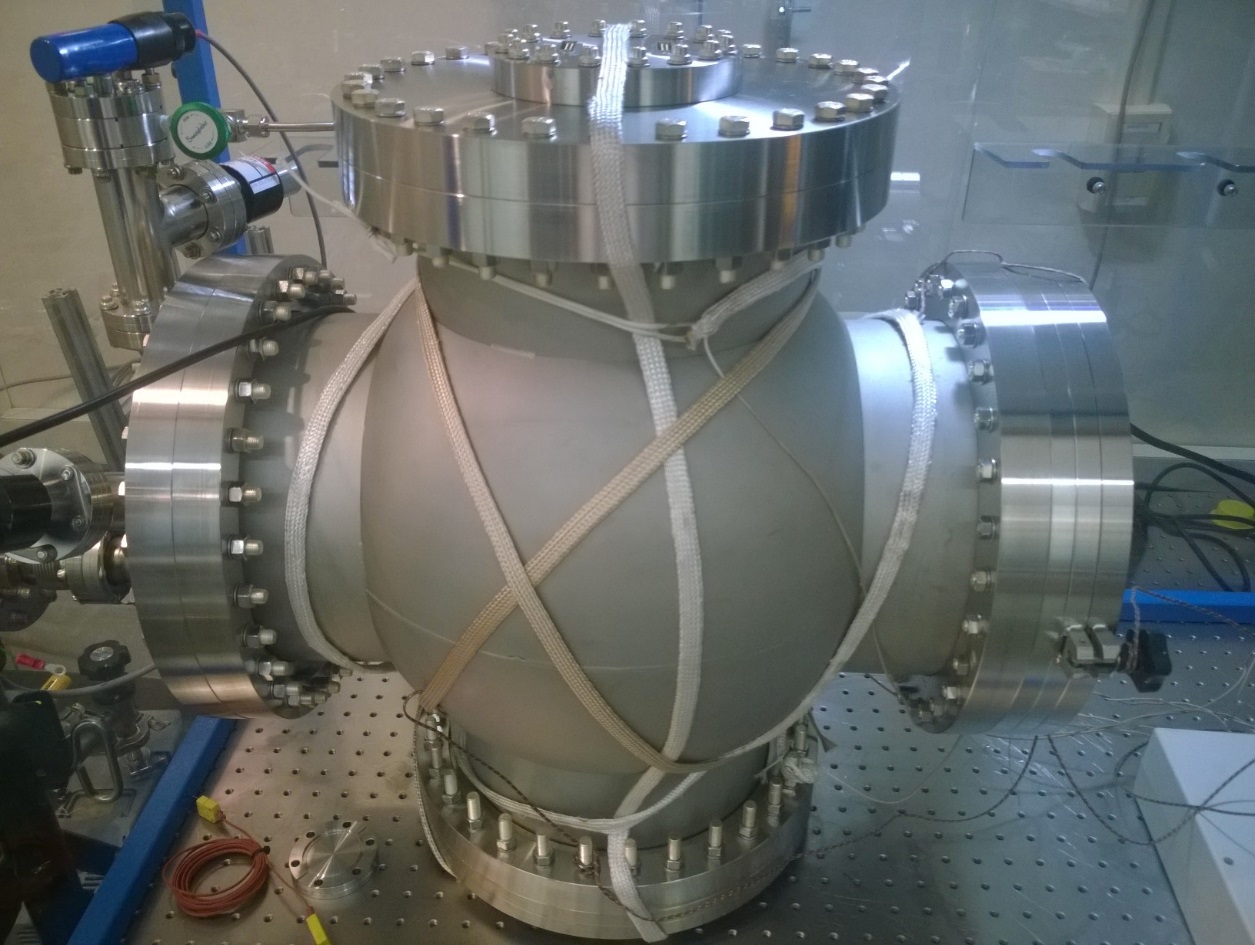
# Vacuum log:

from Jan 8, Feb 25, and March 28



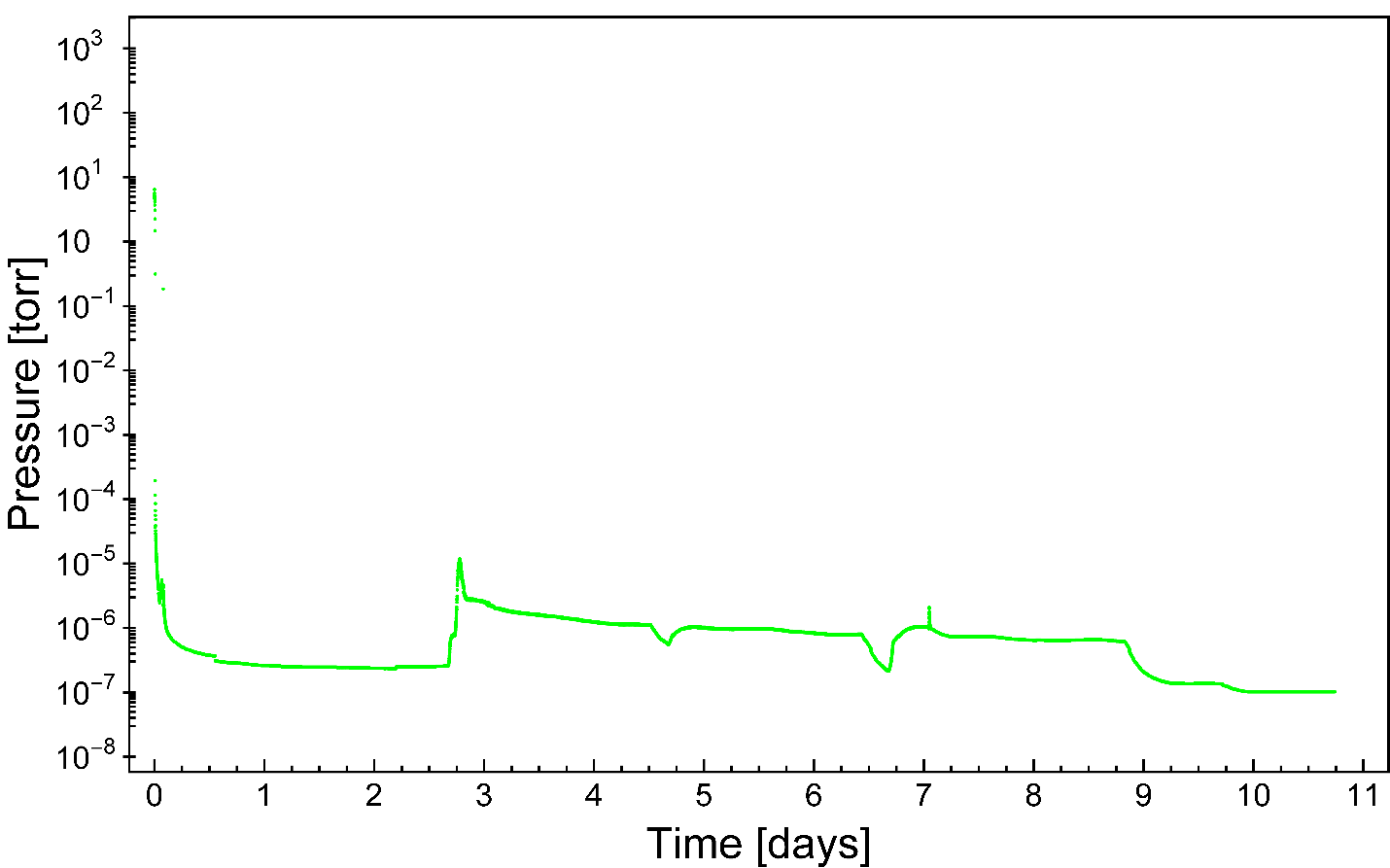


# Status April 22: Started bake out at up to 100 C for a week:



Pressure curve during the bake out:

Hitter tap controller max soak time is 48 hours. After that it was turned on manually every time.



Hitting turn back on 115 C

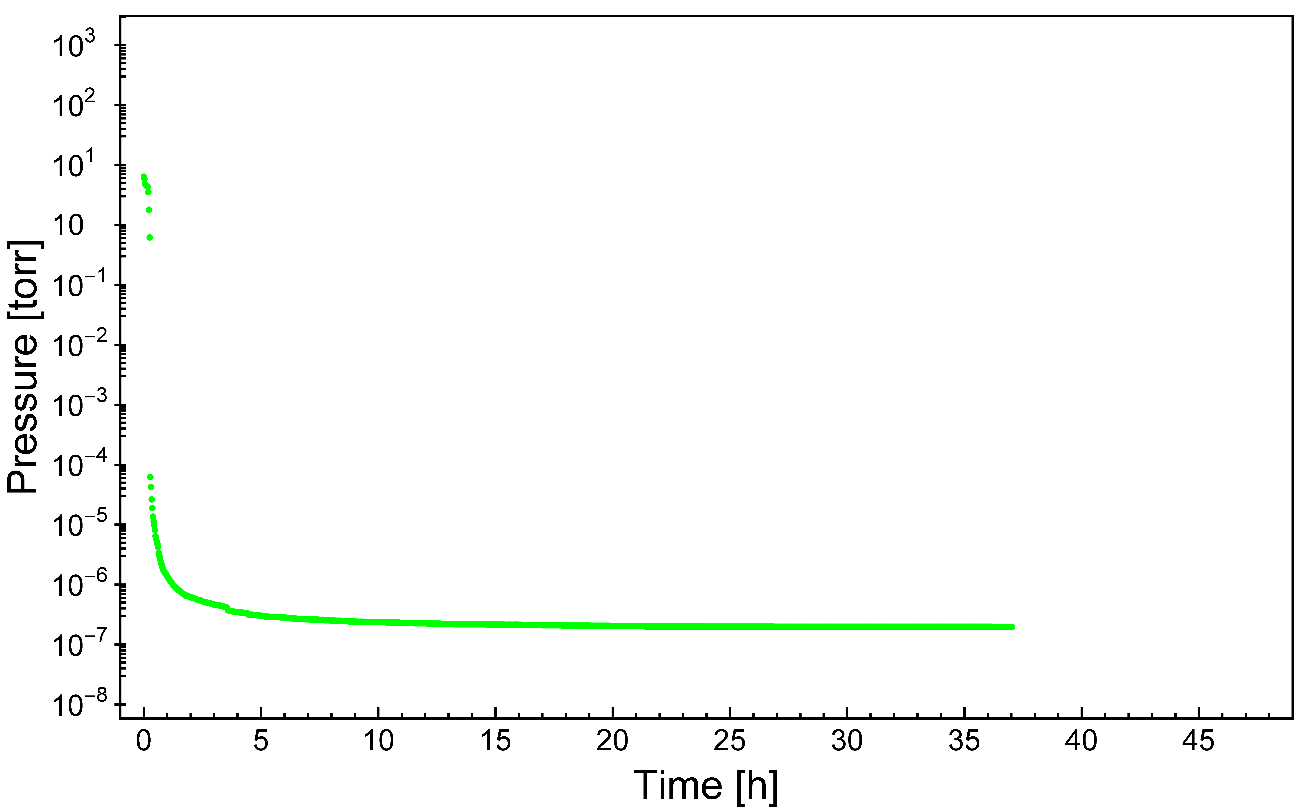
Hitting turn back on 75 C

Cooling down

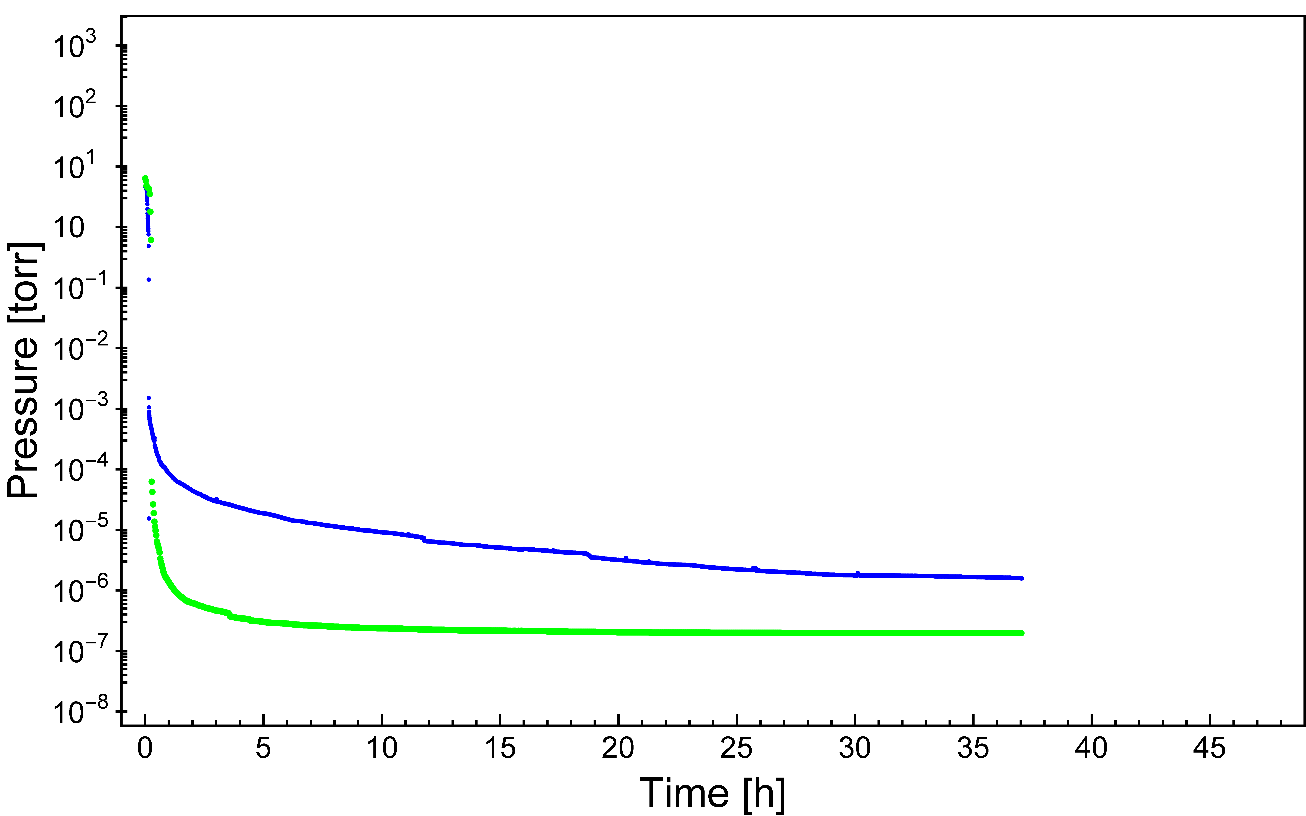
Hitting turn on 75 C

Pump down

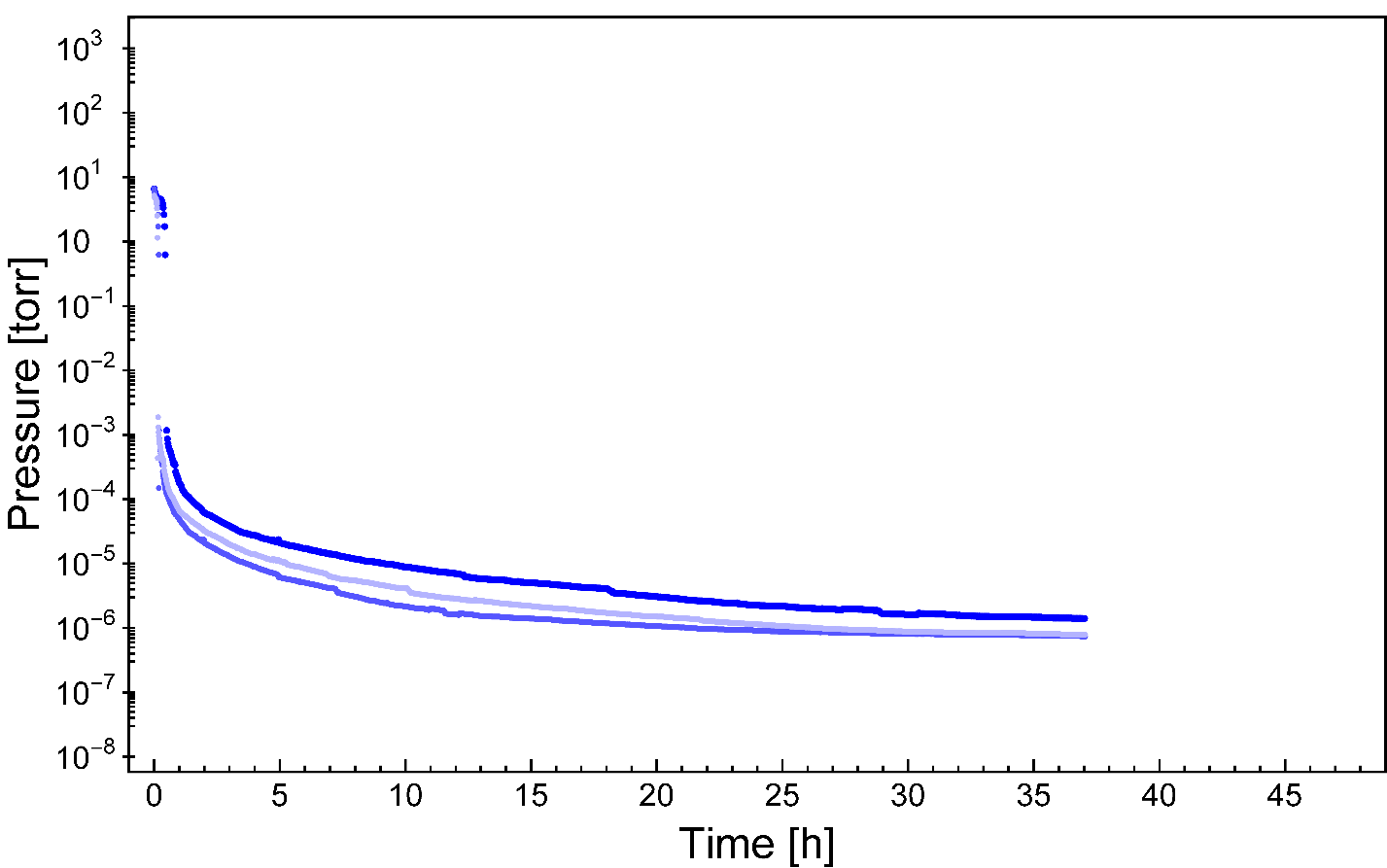
# Status May 5: Pump down after the first vent with N: very fast



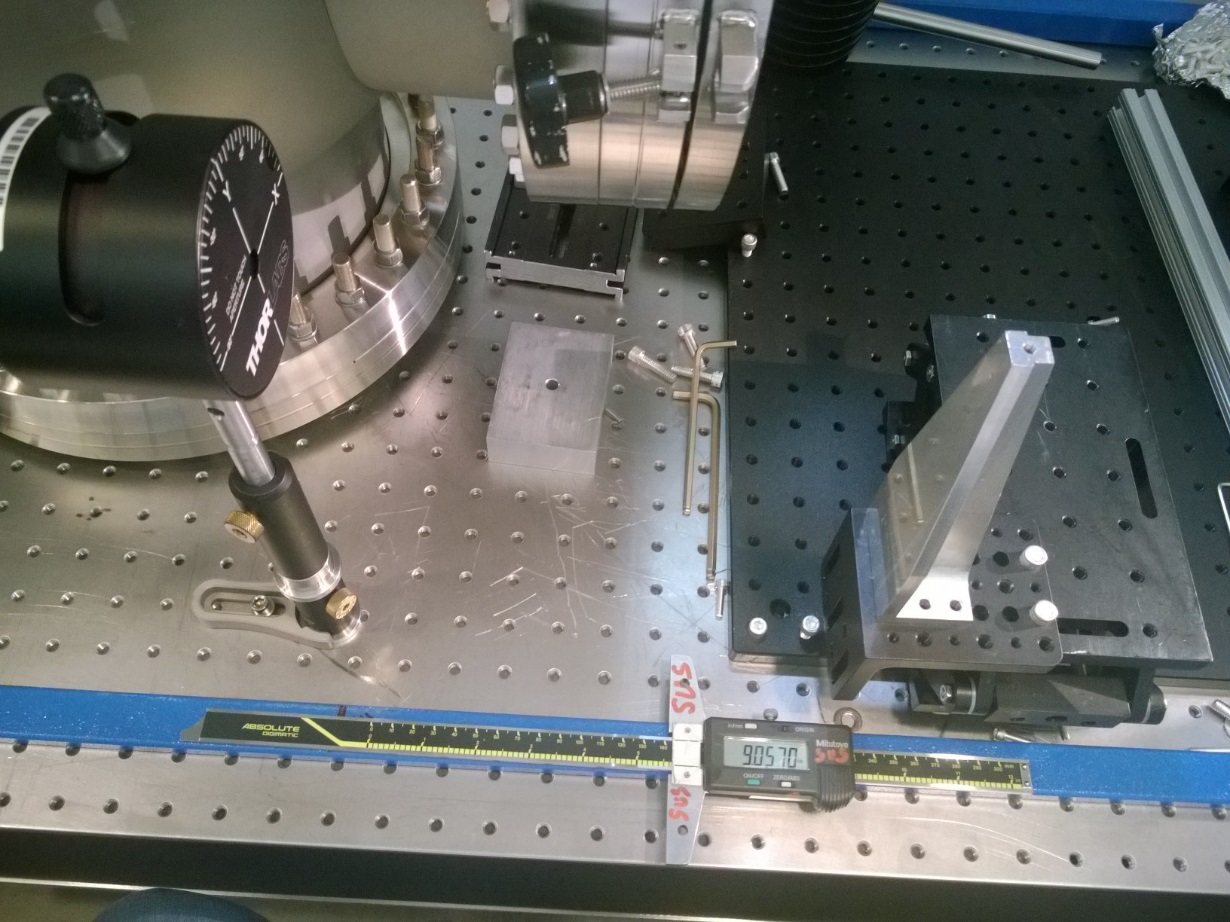
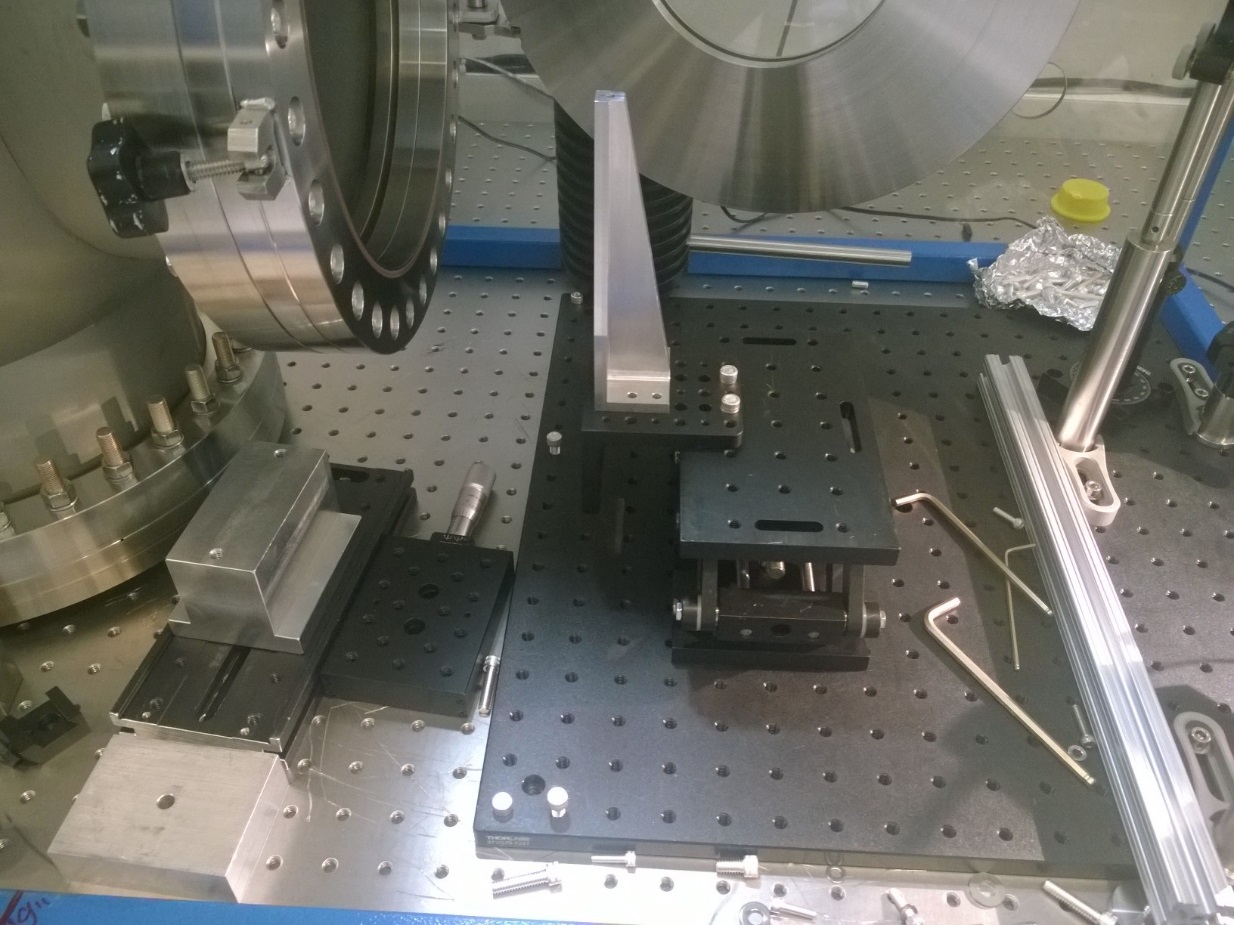
# Status May 23: Pump down with XY stage inside for the first time



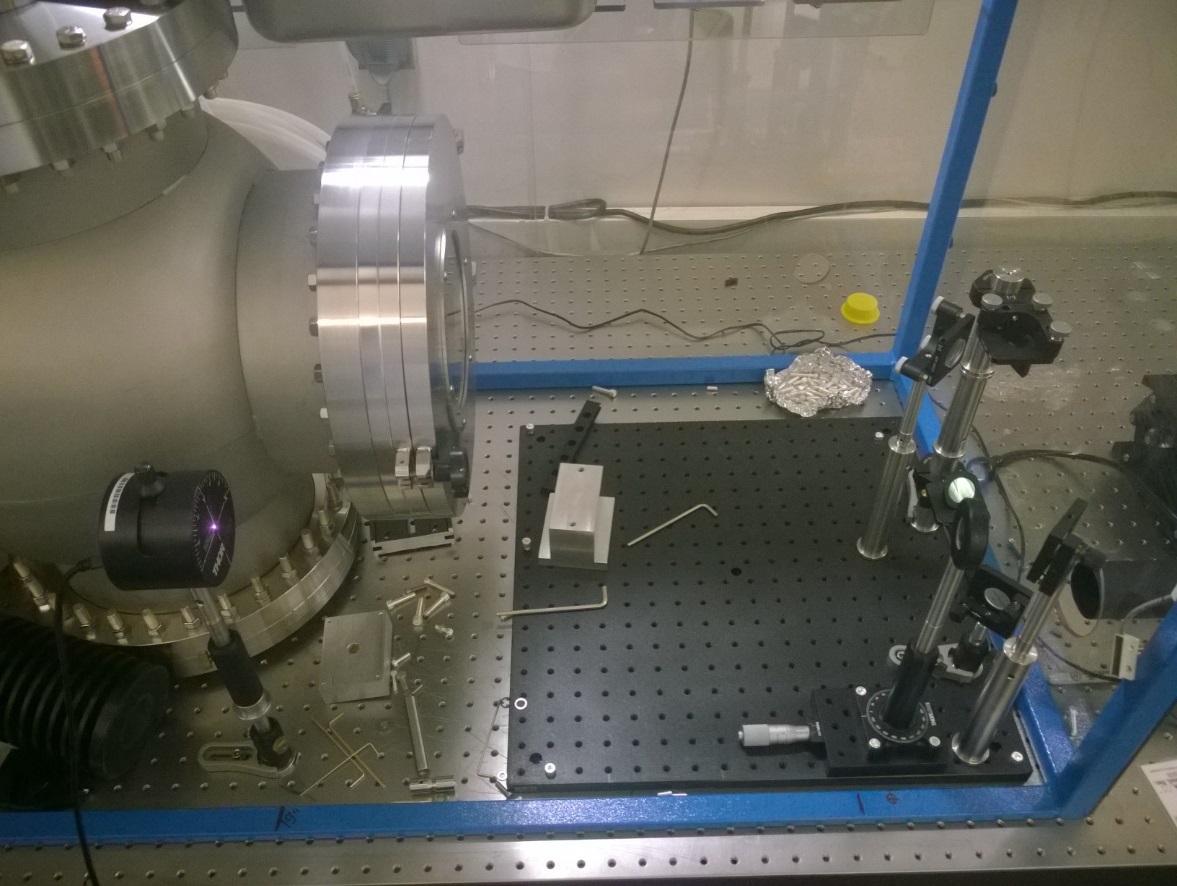
# Status June 6: Improvement for later xy-stage pump downs:

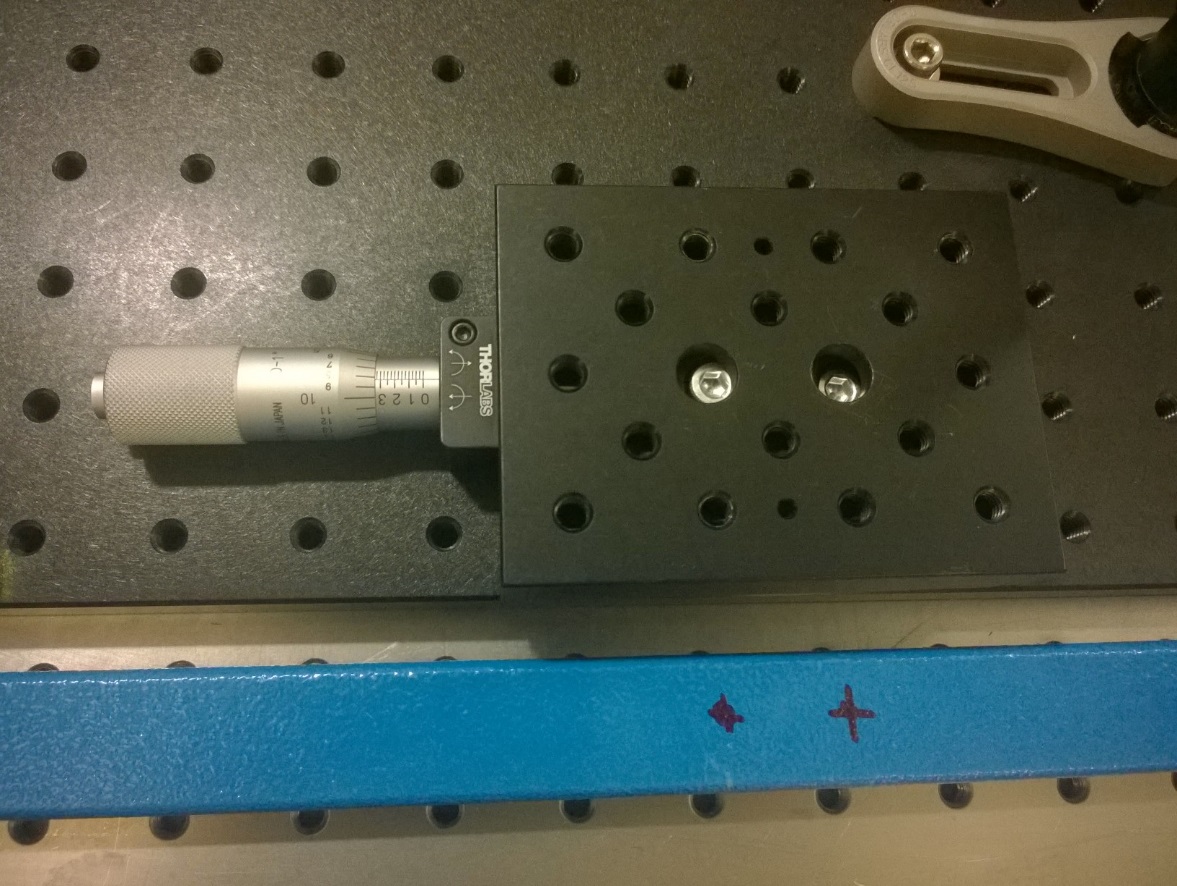


# Laser layout alignment

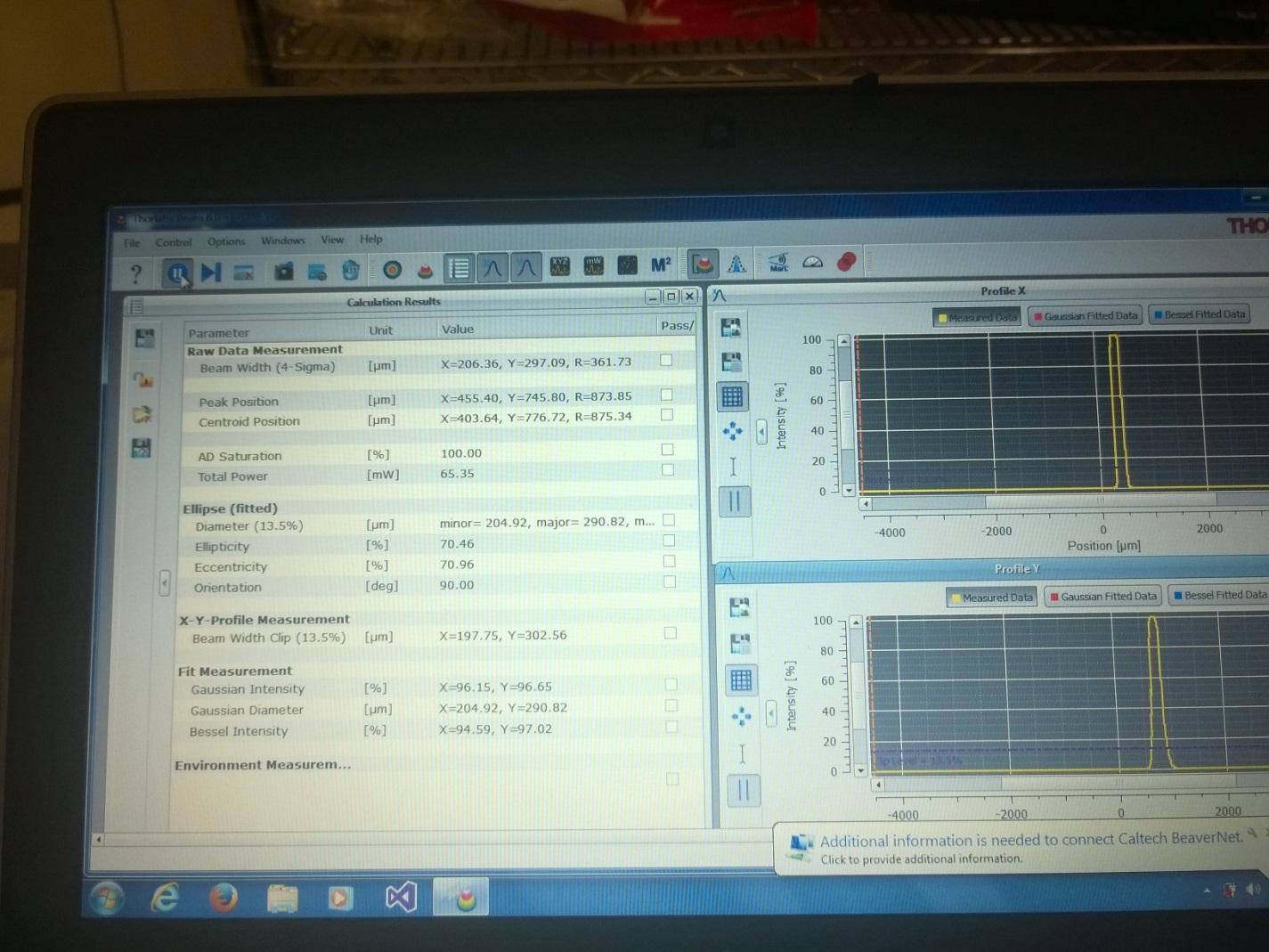
Placed a beam profiler at the target position but outside the chamber:

Laser: anodized pipe -> mirror -> periscope ->mirror -> mirror-> focal lance-> beam profiler

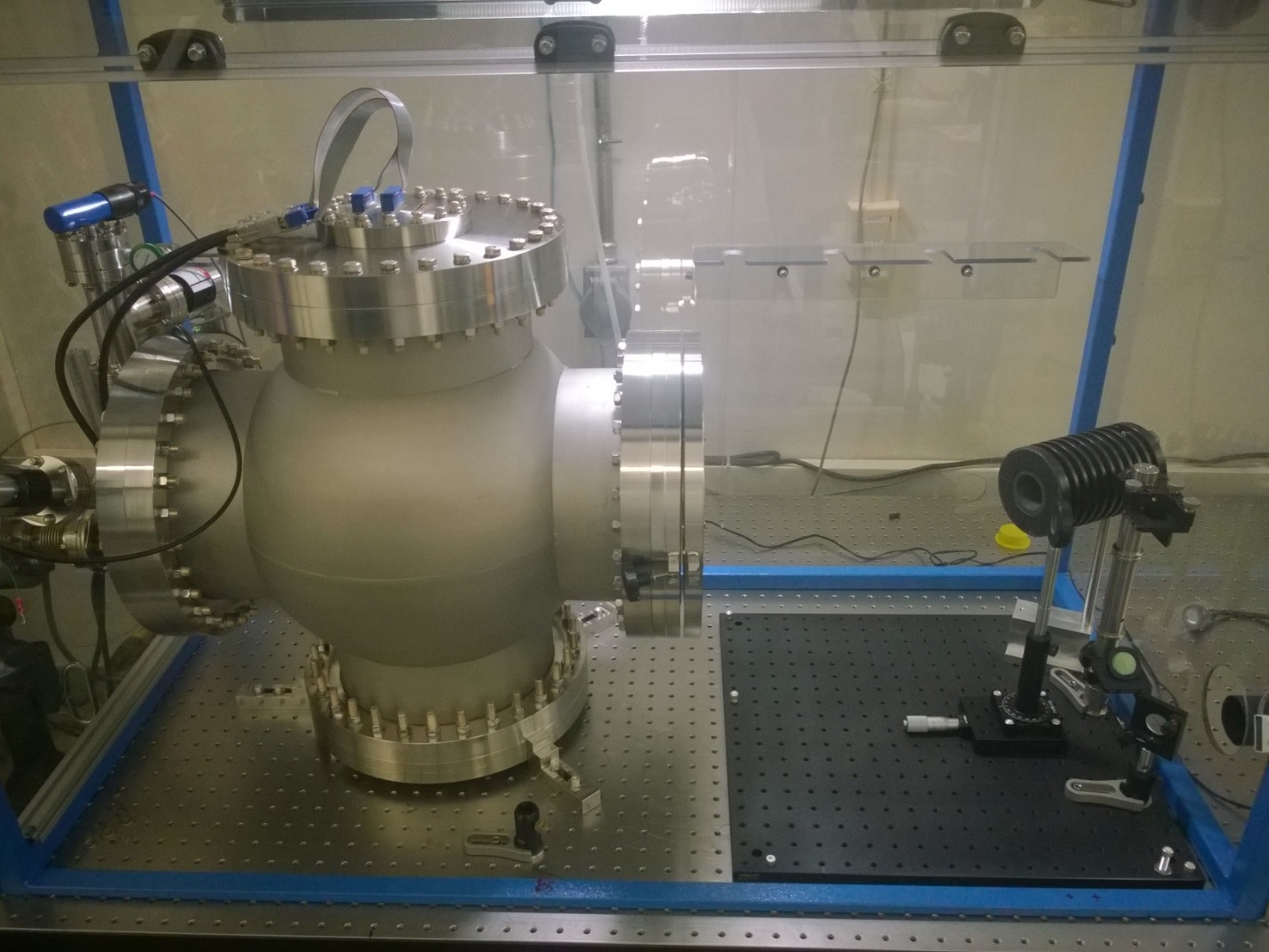


Focal distance was adjusted at the translation stage as:

Beam profiler measured about 100 micron beam waist:



The translation stage with the focal lance has been moved next to the periscope keeping the same distance to the target.



A phone camera could register the beam at the target:

